

BELL TELEPHONE LABORATORIES, INCORPORATED

MAY 1 1981

6-153

COMMON SYSTEMS
FOR USE WITH NO. 3 ESS
ARRANGED WITH 2-WIRE FEATURES
STORE FANOUT BOARDS TEST-PART B
(CDG5FB)

THE CONTENT OF THIS MATERIAL IS PROPRIETARY AND CONSTITUTES A TRADE SECRET. IT IS FURNISHED PURSUANT TO WRITTEN AGREEMENTS OR INSTRUCTIONS LIMITING THE EXTENT OF DISCLOSURE. ITS FURTHER DISCLOSURE IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF ITS OWNER, WESTERN ELECTRIC COMPANY, INCORPORATED, IS PROHIBITED.

ISSUE 5
02/05/81

AT&TCO
SPCS

PR-1C926-S0
153 PAGES

PRINTED IN U.S.A.



SECTION DICTIONARY

NUMBER	NAME	MAXIMUM	ORIGIN	TYP	ADDRESS-MODIFICATION
01	CSTFB5	0000472		C	
02	CSTFB6	0000500		C	
03	CSTFB7	0000571		C	
04	CSTFB8	0000217		C	
05	CPATCH	0001004		C	
06	CPATCH1	0000000		C	
07	CPATCH2	0000000		C	
08	CPATCH3	0000064		C	
09	CPATCH7	0000320		C	
0A	TFAPCH2	0000000		C	
0B	TPATCH	0000000		C	

STORE FANOUT BOARDS TEST-PART B

PR-1c926-50

23:35:52 02/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGFSB

ISSUE 05 PAGE A1



VERSION W77D OF SWAP; VERSION OF EPL

23:35:52 2/05/81 ****

CDGSFB W77D

0022600
0022600
0022600

```

01 DBNAM NO33E313.OFF.DATABASE
02 RELNAM NO3ESS
03 GETLIB LIBRARY, MEMBER=NOPTBL
04 GETLIB LIBRARY, MEMBER=SYSMAC
05 GETLIB LIBRARY, MEMBER=SYSSYM
06 GETLIB LIBRARY, MEMBER=PATCH2
07 FIRSTOPTSS
08 VERSION 3ACC, FIELD, ESS2E
09 PATCHINIT
10 NO33E313.OFF.OPMS(D) DECK
11 DSQUAL NO33E313
12 LISTING N, CRUNCH=Y, SYSOUT=N
13 #####
14 ##
15 ## UNIX ID = NO3PAG
16 ##
17 #####
18 #####
19 ###
20 ### pid date time rel
21 ###
22 ### cdgsfb 1/24/81 17:26:45 7.1.1.1
23 ###
24 #####

```

31 # THIS DATA SET EDITED FOR UNIX ON 05/25/78

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 1

23:35:52 2/05/81 ****

CDGSFB W77D

01 GETLIB MEMBER=CTVTAB
02 NAME CDGSFB

06 ## The following is a list of the valid csects for program CDGSFB

0022600
0023272
0023772
0024563

08 CSTFB5 CSECT
09 CSTFB6 CSECT
10 CSTFB7 CSECT
11 CSTFB8 CSECT

14 ## The following csects are necessary for patching

0111432
0112562
0114107
0115073
0121236

16 CPATCH CSECT
17 CPATCH1 CSECT
18 CPATCH2 CSECT
19 CPATCH3 CSECT
20 CPATCH7 CSECT

0116774

22 TFAPCH2 CSECT

0600000

24 TPATCH CSECT

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 2

23:35:52 2/05/81 ****

CDGSFB W770

0600000

```

01  GETLIB  MEMBER=BSAIMAC
02  GETLIB  MEMBER=MEMDGM
03  GETLIB  MEMBER=TTVMAC
04  GETLIB  MEMBER=DGMMAC
05  BEGIN  DIAG  DGSFB,3ACC  # SELECT FIELD MACROS
                                # RUN ON SACC
-001- 06 CDGNM  EXTERN  NMICRO
-001- 07 CDGNM  EXTERN  NRETRN
-001- 08 CDGNM  EXTERN  NZRETRN
-001- 09 CDGNM  EXTERN  NCTAT
-001- 10 CDGNM  EXTERN  NSTOP
-001- 11 CDGNM  EXTERN  NDISABA
-001- 12 CDGNM  EXTERN  NDISABB
-001- 13 CDGNM  EXTERN  NSTRTCLK
-001- 14 CDGNM  EXTERN  NSTPCLK
-001- 15 CDGNM  EXTERN  NTGCLK
-001- 16 CDGNM  EXTERN  NRECLK
-001- 17 CDGNM  EXTERN  NZERO_ER
-001- 18 CDGNM  EXTERN  NPROS
-001- 19 CDGNM  EXTERN  NTESTSEG
-001- 20 CDGNM  EXTERN  NFAILTST
-001- 21 CDGNM  EXTERN  NTTY
-001- 22 CDGNM  EXTERN  NMAK
-001- 23 CDGNM  EXTERN  NFASSTST
-001- 24 CDGNM  EXTERN  NSEND
-001- 25 CDGNM  EXTERN  NZSEND
-001- 26 CDGNM  EXTERN  NADD_OFF
-001- 27 CDGNM  EXTERN  NADMIC
-001- 28 CDGNM  EXTERN  NLDHIR
-001- 29 CDGNM  EXTERN  NEXCUTE
-001- 30 CDGNM  EXTERN  NCOMPARE
-001- 31 CDGNM  EXTERN  NFRZ
-001- 32 CDGNM  EXTERN  NBEGIN
-001- 33 CDGNM  EXTERN  NLP_END
-001- 34 CDGNM  EXTERN  NSKIP
-001- 35 CDGNM  EXTERN  NABT
-001- 36 CDGNM  EXTERN  NRDMICRO
-001- 37 CDGNM  EXTERN  NCLAMS
-001- 38 CDGNM  EXTERN  NNO3CD
-001- 39 CDGNM  EXTERN  NTRTEST
-001- 40 CDGNM  EXTERN  NZERPT
-001- 41 CDGNM  EXTERN  NFLBITS
-001- 42 CDGNM  DIRECT  INTRPNO3
-001- 43 CDGNM  EXTERN  NBGN
-001- 44 CDGNOF  EXTERN  PASSOFF
-001- 45 CDGNOF  EXTERN  FAILOFF
-001- 46 CDGNM  EXTERN  SLDMCHBF
-001- 47 CDGNM  EXTERN  SLDHIRLF
-001- 48 CDGNM  EXTERN  SMCHF
-001- 49 CDGNM  EXTERN  NRTNBLM

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 3

23:35:52 2/05/81 ****

CDGFB

W77D

-001- 01 CDGFM EXTERN NWDST

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGFB ISSUE 05 PAGE 4

23:35:52 2/05/81 ****

CDGSFB W77D

-001- 01 # THIS DIAGNOSTIC PROGRAM IS ALL OR PARTIALLY WRITTEN IN A MACRO
-001- 02 # LANGUAGE WHICH PRODUCES TABLES WHICH ARE INTERPRETED BY THE
-001- 03 # DIAGNOSTIC MONITOR PROGRAM. FOR INFORMATION REGARDING THE
-001- 04 # STRUCTURE OF THE TABLES, SEE THE SECTION OF PROGRAM CDGNM (PR-1C910-01)
-001- 05 # ENTITLED "DIAGNOSTIC TABLE INTERPRETER". FOR A GENERAL DESCRIPTION
-001- 06 # OF THE DIAGNOSTIC PHILOSOPHY AND THE DETAILED REPAIR PROCEDURE,
-001- 07 # SEE THE TROUBLE LOCATION MANUAL (TLN-1C900) SECTION B.

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 5

23:35:52 2/05/81 ****

CDGSFB

W77D

0600000

01 CTVTAB EXTERN WXAIT
02 SYMLIB

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 6

23:35:52 2/05/81 ****

CDGSFB

W77D

-002- 01 # EXTERNS REQUIRED BY STORE DIAGNOSTIC TESTS:

-002- 04 MASACS EXTERN MASCIOSC

-002- 06 CBLM EXTERN PRTHASER

-002- 07 CBLM EXTERN WAIT

-002- 09 CDGNN EXTERN LOOPIND

-002- 10 CDGNN EXTERN NOSTPMES

-002- 11 CDGNN EXTERN PASSTST

-002- 12 CTSD EXTERN DGNLIM

-002- 14 CDGSBS EXTERN MEMOP

-002- 15 CDGSBS EXTERN MEMOPI

-002- 17 CDGSFA EXTERN FORNDX

-002- 19 CDGSIO DIRECT MASIOM

-002- 20 CDGSIO EXTERN MDSELSK

-002- 21 CDGSIO EXTERN MODSIZE

-002- 22 CDGSIO EXTERN STRSIZE

-002- 23 CDGSIO EXTERN STSELSK

-002- 24 CDGSIO EXTERN FINAL

-002- 25 CDGSIO EXTERN CONTPREP

-002- 28 CSYSUB EXTERN EXCOFLPG

-002- 29 CSYSUB EXTERN INIT_OCC

-002- 30 CSYSUB EXTERN INITOST

-002- 31 CSYSUB EXTERN INSTMC

-002- 32 CSYSUB EXTERN RGCHKADR

-002- 33 CSYSUB EXTERN UPD_OTS

-002- 35 CTSD EXTERN MASERCNT

-002- 36 CTSD EXTERN PAGSCR

-002- 37 CTSD EXTERN DGREQ

-002- 39 MASACS EXTERN MASONOFF

-002- 41 TDATA EXTERN STRLIM

-002- 42 TDATA EXTERN WDSTR

-002- 43 TDATA EXTERN WPTBL

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 7

23:35:52 2/05/81 ****

CD6SFB

W77D

-002- 01 # STORE DIAGNOSTIC REGISTER DEFINITIONS

0000010	-002- 04 CHKNDX EQU	8	# INDEX REGISTER FOR REFRESH SELECT CHECK
0000010	-002- 05 F0BCNT EQU	8	# SCRATCH REG FOR CURRENT FANOUT BOARD COUNT
0000011	-002- 07 RANGE EQU	9	# NUMBER OF OFF-LINE WORDS TO BE TESTED

-002- 11 # REGISTER SYMBOLS USED IN THE MEMORY MODULE TEST:

0000000	-002- 12 PATBAK EQU	R0	# DATA READ/WRTTEN VIA OTHER-STORE
0000001	-002- 13 HIPATBAK EQU	R1	# HIGH DATA READ/WRTTEN VIA OTHER-STORE
	-002- 14 HIPATBAKXT SYN	R1XT	# DEFINE FOR IGNORANT MINODE MACRO
0000002	-002- 15 BLKMSK EQU	R2	# MASK TO BLOCK INTERRUPTS & CHECKS
0000003	-002- 16 STRSTAT EQU	R3	# SAVE (WIDE) STORE STATUS
0000004	-002- 17 LSTPAT EQU	R4	# PATTERN PREVIOUSLY WRITTEN
0000005	-002- 18 NXTPAT EQU	R5	# PATTERN CURRENTLY BEING WRITTEN
0000006	-002- 19 PATNDX EQU	R6	# NUMBER OF TEST PATTERN BEING MATCHED
0000007	-002- 20 MINNDX EQU	R7	# MINOR LOOP INDEX
0000010	-002- 21 ERSAVE EQU	R8	# ERROR REGISTER AFTER OTHER-STORE READ
0000010	-002- 22 PARSLT EQU	R8	# PARITY TEST RESULTS - FIELD ONLY
0000014	-002- 23 MEMADDR0 EQU	R12	# UPPER ADDRESS BITS OF MEMORY TEST AREA
0000015	-002- 24 MEMADDR1 EQU	R13	# LOWER ADDRESS BITS OF MEMORY TEST AREA
0000014	-002- 25 MEMADDR EQU	RA0	# BASE ADDRESS OF MEMORY TEST AREA
0000016	-002- 26 PATADDR EQU	RA1	# ADDRESS OF TEST PATTERN TABLE

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CD6SFB ISSUE 05 PAGE 8

23:35:52 2/05/81 ****

CDGSFB

W77D

-002- 01 # FUNCTION OF BITS WITHIN I/O MESSAGE SENT TO STORE:
 -002- 02 CIOBUF LAYOUT

-002- 05 CINIT	ITEM	1	# MAIN STORE CONTROLLER INITIALIZATION
-002- 06 CKSTP	ITEM	1	# CONTROLLER CLOCK STEP
-002- 07 CKHLT	ITEM	1	# CONTROLLER CLOCK HALT
-002- 08 REFST	ITEM	1	# STORE REFRESH STOP
-002- 09 STORDER	ITEM	8	# 4/8 MAINTENANCE STATE CODE
-002- 10 D10TH	ITEM	1	# 0-10 BIT TIMING SHIFTER FAKE
-002- 11 LDFG	ITEM	1	# ORDER CHECKER EXCLUSIVE-OR LOAD
-002- 12 FSEL	ITEM	1	# STORE SELECT FORCE ON TIMING BOARD A
-002- 13 FBT09	ITEM	1	# FORCE BIT 15 ACTIVE IN MAIN SHIFTER
-002- 14	LOEND		
-005- 12	#		

CIOBUF				STORDER															
00	FBT09	FSEL	LDFG	D10TH	4/8 MAINTENANCE STATE CODE								REFST	CKHLT	CKSTP	CINIT			
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSFB

ISSUE 05

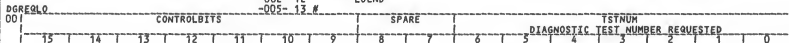
PAGE 9

23:35:52 2/05/81 ****

CDG5FB W77D

-002- 01 # LAYOUT OF DIAGNOSTIC REQUEST WORD (DGREQ) WITH TEST NUMBER REQUESTED
 -002- 02 # NOTES: 1. REST OF BITS (CONTROLBITS) ARE DEFINED BY DGREQIP LAYOUT
 -002- 03 # FOUND IN PROLOGUE OF DIAGNOSTIC MONITOR (CDGNM)
 -002- 04 # 2. IF TEST NUMBER (TSTNUM) IS ZERO, THE ENTIRE DIAGNOSTIC
 -002- 05 # TEST SEQUENCE HAS BEEN REQUESTED
 -002- 06 # 3. STORAGE SPACE FOR DGREQ IS ALLOCATED IN CTSD

-002- 09 TSTNUM ITEM 7 # DIAGNOSTIC TEST NUMBER REQUESTED
 -002- 10 SPARE ITEM 2
 -002- 11 CONTROLBITS ITEM 7
 -002- 12 LOEND
 -002- 13 #



STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 10

23:35:52 2/05/81 ****

CDGSFB W77D

-002- 01 # STORAGE FORMAT FOR MAIN STORE (MY & OTHER) SUBCHANNEL ADDRESS:

-002- 04	MSSC0	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 0
-002- 05	OSSC0	ITEM	16	#	ADDRESS OF OTHER STORE SUBCHANNEL 0
-002- 06	MSSC1	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 1
-002- 07	OSSC1	ITEM	16	#	ADDRESS OF OTHER STORE SUBCHANNEL 1
-002- 08	MSSC2	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 2
-002- 09	OSSC2	ITEM	16	#	ADDRESS OF OTHER STORE SUBCHANNEL 2
-002- 10	MSSC3	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 3
-002- 11	OSSC3	ITEM	16	#	ADDRESS OF OTHER STORE SUBCHANNEL 3
-002- 12	LOEND				
-002- 13	#				

MASCIOSC

00	MSSC0	ADDRESS OF MY STORE SUBCHANNEL 0
01	OSSC0	ADDRESS OF OTHER STORE SUBCHANNEL 0
02	MSSC1	ADDRESS OF MY STORE SUBCHANNEL 1
03	OSSC1	ADDRESS OF OTHER STORE SUBCHANNEL 1
04	MSSC2	ADDRESS OF MY STORE SUBCHANNEL 2
05	OSSC2	ADDRESS OF OTHER STORE SUBCHANNEL 2
06	MSSC3	ADDRESS OF MY STORE SUBCHANNEL 3
07	OSSC3	ADDRESS OF OTHER STORE SUBCHANNEL 3

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 11

23:35:52 2/05/81 ****

CDG5FB

W77D

-002- 01 # WORDS IN PAGING BUFFER USED BY STORE DIAGNOSTIC TESTS:
 -002- 02 LOOPSUB ITEM 16 # ADDRESS OF SUBSTITUTE FOR 'LOOP' IN TTY
 # TROUBLE MESSAGE
 -002- 04 IOADDR ITEM 16 # I/O SUBCHANNEL ADDRESS FOR CURRENT
 STORE CONTROLLER
 -002- 06 FOBNUM ITEM 16 # NUMBER OF MEMORY MODULES (OR FANOUT
 BOARDS) IN STORE CURRENTLY UNDER TEST
 -002- 08 TIMSAV ITEM 16 # SAVE TIMING CONSTANT FOR TIMEOUT
 SUBROUTINE
 -002- 10 UPADDR ITEM ADDR # ADDRESS OF NEXT BLOCK OF MEMORY TO BE
 UPDATED AFTER MEMORY PATTERN TEST
 -002- 12 BASADDR ITEM ADDR # BASE ADDRESS OF STORE/MOD UNDER TEST

-002- 15 LOEND

-002- 16 #

PAGE

24	LOOPSUB	
25	ADDRESS OF SUBSTITUTE FOR 'LOOP' IN TTY TROUBLE MESSAGE	
26	IOADDR	
27	I/O SUBCHANNEL ADDRESS FOR CURRENT STORE CONTROLLER	
28	FOBNUM	
29	NUMBER OF MEMORY MODULES (OR FANOUT BOARDS) IN STORE CURRENTLY UNDER TEST	
30	TIMSAV	
31	SAVE TIMING CONSTANT FOR TIMEOUT SUBROUTINE	UPADDR
32	*****	
33		BASADDR
34	*****	
35	15	14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 12

23:35:52 2/05/81 ****

CDGSFB W77D

-002- 01 # STORE ERROR REGISTER (SER) BIT ASSIGNMENT:

-002- 02 # NOTE: THESE INPUTS ARE ENABLED BY BIT09 OF THE MAIN SHIFTER

-002- 05 SER LAYOUT
 -002- 06 F0BTERB ITEM 1 # STORE TIMING ERROR FROM UNSELECTED FOB
 -002- 07 MPXER ITEM 1 # MULTIPLEXOR ERROR DETECTED BY CHECK BOARD
 -002- 09 CHDIF ITEM 1 # ERROR INDICATED BY STORE COMMAND CHECKER
 -002- 11 SCHER ITEM 1 # PREMATURE STORE COMPLETE (SCH)
 -002- 12 SNER ITEM 1 # ERROR IN MAIN SHIFTER OPERATION
 -002- 13 MODER ITEM 1 # ALL-SEEMS-WELL SIGNAL NOT RECEIVED FROM MODULE (FOB) ACCESSED DURING NORMAL CYCL
 -002- 15 RSELER ITEM 1 # ALL MEMORY MODULES (FOBS) NOT SELECTED DURING REFRESH
 -002- 17 F0BTERA ITEM 1 # STORE TIMING ERROR FROM SELECTED FOB
 -002- 18 F0BPARER ITEM 1 # PARITY ERROR DETECTED IN ADDRESS REACHING FANOUT BOARD(S)
 -004- 20 ##### F0BPARER WILL APPEAR AS F0BPAE IN PICTURES
 -002- 21 DHPER ITEM 1 # ERROR IN PARITY OVER HIGH DATA BITS
 -002- 22 PWER ITEM 1 # ERROR IN PARITY FOR WIDE STORE
 -002- 23 TBER ITEM 1 # ERROR DETECTED ON TIMING BOARD
 -002- 24 ITEM 1 # SPARE
 -002- 25 DLPER ITEM 1 # ERROR IN PARITY OVER LOW DATA BITS
 -002- 26 ITEM 1 # SPARE
 -002- 27 ITEM 1 # RESERVED
 -002- 28 LOEND
 -005- 29 #

SER	001	SPARE	DLPER	TBER	PWER	DHPER	F0BPARER	F0BTERA	RSELER	MODER	SHER	SCHER	CHDIF	MPXER	F0BTERB
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 13

23:35:52 2/05/81 ****

CDGSFB

W77D

-002- 01 # STORE BUS CHECK BIT ASSIGNMENTS IN RESPONSE MESSAGE:
 -002- 02 # NOTE: THESE INPUTS ARE ENABLED BY ISOLATE CHECK (ISOCHK) I/O ORDER
 -002- 03 # W/ LOAD F & G (LDLG) OPTION SET

-002- 06 ISOBTS ITEM 7

-002- 07 RSVDO ITEM 1

-002- 10 WDISOL ITEM 4

-002- 11 SDPCK ITEM 1

-002- 12 ZEPCK ITEM 1

-002- 14 CTRLCK ITEM 1

-002- 15 FXORG ITEM 1

-002- 16 LOEND

-002- 17 #

SDO-6, SDO-14 ISOLATE TEST RESULTS
 # SD7, SD15 ISOLATE TEST RESULT - ONLY
 GATED INTO BY LOAD I/O DECODER CHECK
 (LOADCHK) OPTION
 # RESULTS OF WIDE DATA (SD16-23) ISOLATE
 # RESULT OF STORE DATA PARITY ISOLATION
 # RESULT OF EXTENDED (3 BIT) PARITY
 ISOLATE
 # RESULT OF STORE CONTROL LEADS ISOLATION
 # I/O ORDER CHECKER EXCLUSIVE-OR RESULT

CHKWD	FXORG	CTRLCK	ZEPCK	SDPCK	WDISOL	RSVDO	ISOBTS	SDO-6, SDO-14 ISOLATE TEST RESULTS								
001	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 14

23:35:52 2/05/81 ****

CDGSFB W77D

-002- 01 # REFRESH SELECT CHECK BIT ASSIGNMENTS IN STORE ERROR REGISTER
 -002- 02 # NOTE: THESE INPUTS ARE ENABLED BY EXTERNAL-ERROR-LOAD(EXERLD) ORDER

-002- 05 RSEL06 ITEM 7 # REFRESH SELECTS FROM FANOUT BOARDS 0-6
 -002- 06 RSV01 ITEM 1 # RESERVED - FOOTER A IS SET AFTER INIT
 -002- 07 SAPHLP ITEM 1 # STORE ADDRESS PARITY HIGH LOOP RESULT
 -002- 08 SA17LP ITEM 1 # STORE ADDRESS BIT 17 LOOP RESULT
 -002- 09 STRSLP ITEM 1 # STORE SELECT ADDRESS BITS LOOP RESULT
 -002- 10 ITEM 1 # SPARE
 -002- 11 RSEL7 ITEM 1 # REFRESH SELECT FROM FANOUT BOARD 7
 -002- 12 ITEM 3 # SPARE BITS
 -002- 13 LOEND
 -002- 14 #

RSLCHK		RSEL7		STRSLP		SA17LP		SAPHLP		RSV01		RSEL06			
001															
SPARE BITS		SPARE								REFRESH SELECTS		FROM FANOUT BOARDS 0-6			
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

0010177 -002- 22 RSELBTS EQU M(RSEL06)M(RSEL7) # MASK FOR REFRESH SELECT BITS
 0167600 -002- 23 RSELBTSN EQU (~RSELBTS)&&(111111111111111111)

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 15

23:35:52 2/05/81 ****

CDGSFB

W77D

-002- 01 # STORE STATUS REGISTER LAYOUT -- INCL BITS USED IN FIELD VERSION(S) OF TESTS
 -002- 02 PLBAK ITEM 1 # PARITY LOW VALUE READ BACK
 -002- 03 PHBAK ITEM 1 # PARITY HIGH VALUE READ BACK
 -002- 04 ITEM 2 # UNUSED
 -002- 05 OWDSTRO ITEM 1 # WIDE STORE INDICATOR BIT
 -002- 06 SNGBTERR ITEM 1 # SINGLE BIT ERROR FLAG
 -002- 07 PASBT ITEM 1 # REPEAT PASS THRU TEST INDICATOR
 -002- 08 ITEM 9 # UNUSED
 -002- 09 LOEND
 -002- 10 #

STRSTAT

001

UNUSED										PASBT	SNGBTERR	OWDSTRO	UNUSED		PHBAK	PLBAK
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSFB

ISSUE 05

PAGE

16

23:35:52 2/05/81 ****

CDGSFB

W77D

-002- 01 # STORE DIAGNOSTIC SYMBOL LIBRARY:

```

00000000 -002- 05 BIT0 EQU 0
00000001 -002- 06 BIT1 EQU 1
00000002 -002- 07 BIT2 EQU 2
00000003 -002- 08 BIT3 EQU 3
00000004 -002- 09 BIT4 EQU 4
00000005 -002- 10 BIT5 EQU 5
00000006 -002- 11 BIT6 EQU 6
00000007 -002- 12 BIT7 EQU 7
00000010 -002- 13 BIT8 EQU 8
00000011 -002- 14 BIT9 EQU 9
00000012 -002- 15 BIT10 EQU 10
00000013 -002- 16 BIT11 EQU 11
00000014 -002- 17 BIT12 EQU 12
00000015 -002- 18 BIT13 EQU 13
00000016 -002- 19 BIT14 EQU 14
00000017 -002- 20 BIT15 EQU 15
00000020 -002- 21 BIT16 EQU 16
00000021 -002- 22 BIT17 EQU 17
00000022 -002- 23 BIT18 EQU 18
00000023 -002- 24 BIT19 EQU 19
00000004 -002- 25 FOUR EQU 4
-002- 26 IOBRK TEXT 'I&'
00000000 -002- 27 MOD0 EQU 0
00000001 -002- 28 MOD1 EQU 1
00000002 -002- 29 MOD2 EQU 2
00000003 -002- 30 MOD3 EQU 3
00000004 -002- 31 MOD4 EQU 4
00000005 -002- 32 MOD5 EQU 5
00000006 -002- 33 MOD6 EQU 6
00000007 -002- 34 MOD7 EQU 7
00000001 -002- 35 ONE EQU 1
01777777 -002- 36 ONES EQU 0(1777777)
00000200 -002- 37 OFLNCHNK EQU B(10000000)
00077600 -002- 38 OFLNDONE EQU B(111111110000)

# DELIMITERS FOR I/O ORDER STRINGS

00000000 -002- 41 # NOTE: THE FOLLOWING CONSTANTS ALLOW GENERATION OF ARBITRARY PARITY. APPLICABLE
-002- 42 # BITS ARE 0 & 1 SUCH THAT BIT 0 = VALUE FOR PARITY LOW
-002- 43 # BIT 1 = VALUE FOR PARITY HIGH
-002- 44 # DATA BITS (23-16)(15-8) (7-0)
00000200 -002- 45 PRH0L0 EQU B(10000) # SET PARITY (WIDE=>HIGH=0) LOW=0
00000005 -002- 46 PRH0L1 EQU B(00101) # SET PARITY (WIDE=>HIGH=0) LOW=1
00000012 -002- 47 PRH1L0 EQU B(01010) # SET PARITY (WIDE=>HIGH=1) LOW=0
00000017 -002- 48 PRH1L1 EQU B(01111) # SET PARITY (WIDE=>HIGH=1) LOW=1
00000002 -002- 49 PRWH0L0 EQU B(00010) # SET PARITY WIDE=0 HIGH=1 LOW=0

```

0600000

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 17

23:35:52 2/05/81 ****

CDGSFB W77D

```

0000007 -002- 01 PRM0H1L1 EQU B(00111) # SET PARITY WIDE=0 HIGH=1 LOW=1
0000010 -002- 02 PRM1H0L0 EQU B(01000) # SET PARITY WIDE=1 HIGH=0 LOW=0
0000015 -002- 03 PRM1H0L1 EQU B(01101) # SET PARITY WIDE=1 HIGH=0 LOW=1

0000003 -002- 05 THREE EQU 3
0000002 -002- 06 TWO EQU 2
0010000 -002- 07 WPBLKSIZE EQU 0(10000) # WRITE PROTECT BLOCK SIZE = 4K (4096)
0000000 -002- 08 ZERO EQU 0 # ZERO CONSTANT
0000000 -002- 09 ZEROS EQU 0 # VALUES FOR
0000000 -002- 10 OTEST EQU 0 # TEST MACRO
0000001 -002- 11 ITEST EQU 1

```

```

-002- 18 # MAIN MEMORY STATUS CONSTANTS ASSUMING FOLLOWING CONDITIONS:
-002- 19 # 1. MY STORE BUS PORT IS ISOLATED FROM INPUT FROM OTHER PROCESSOR
-002- 20 # 2. MAIN MEMORY CONTROLLER IS NOT UPDATING OTHER STORE
-002- 21 # 3. MY STORE BUS PORT IS ACCESSING MY STORE, E. NOT REVERSED

```

```

0106263 -002- 24 MTCRD EQU 0(106263) # MAIN MEMORY STATUS FOR MAINTENANCE READ
# OPERATION
0106203 -002- 26 MTCWR EQU 0(106203) # MAIN MEMORY STATUS FOR MAINTENANCE
# WRITE OPERATION
0106260 -002- 28 NMLRD EQU 0(106260) # MAIN MEMORY STATUS FOR NORMAL READ
# OPERATION
0106200 -002- 30 NMLWR EQU 0(106200) # MAIN MEMORY STATUS FOR NORMAL WRITE
# OPERATION
0106274 -002- 32 SPRRD EQU 0(106274) # MAIN MEMORY STATUS FOR SPARE READ
# OPERATION
0106214 -002- 34 SPRWR EQU 0(106214) # MAIN MEMORY STATUS FOR SPARE WRITE
# OPERATION

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 18

23:35:52 2/05/81 ****

CDGSFB W77D

-002- 01 # MAIN STORE I/O ORDERS:

0020016	-002- 04 ALLZERO EQU	0(20016)
	-002- 05 ALLZEROT TEXT	'APPLY ERRONEOUS ORDER(0/8) TO CHECKER'
0063476	-002- 06 BADCODE EQU	0(63476)
	-002- 07 BADCODET TEXT	'APPLY ERRONEOUS ORDER(5/8) TO CHECKER'
0047214	-002- 08 BUSCHK EQU	0(47214)
	-002- 09 BUSCHKT TEXT	'CHECK BUS ISOLATION USING SER'
0040374	-002- 10 KCTINIT EQU	0(40374) # STORE CONTROLLER INITIALIZATION (W/O WRITE PROTECT CLEAR)
	-002- 12 KCTINIT TEXT	'INITIALIZE ALL STORE CONTROLLER CIRCUITS'
0043310	-002- 13 CLRSER EQU	0(43310)
	-002- 14 CLRSERT TEXT	'CLEAR STORE ERROR REGISTER'
0046074	-002- 15 CLKSTOP EQU	0(46074)
	-002- 16 CLKSTOPT TEXT	'DISABLE STORE CONTROLLER CLOCK OUTPUT'
0046070	-002- 17 CLKSTRT EQU	0(46070)
	-002- 18 CLKSTRTT TEXT	'ENABLE STORE CONTROLLER CLOCK OUTPUT'
0146074	-002- 19 ERCOLL EQU	0(146074)
	-002- 20 ERCOLLT TEXT	'COLLECT ERRORS IN STORE ERROR REG'
0145454	-002- 21 EXERLD EQU	0(145454) # FAST REFRESH WITH REFRESH & CLOCK STOPPED
	-002- 23 EXERLDT TEXT	'ENABLE EXTERNAL LOAD OF STORE ERROR REG'
0145454	-002- 24 EXLDB15 EQU	0(145454)
	-002- 25 EXLDB15T TEXT	'ENABLE EXTERNAL LOAD OF STORE ERROR REG W/ ERROR COLLECT OPTION'
0005440	-002- 26 FASTREF EQU	0(5440)
	-002- 27 FASTREFT TEXT	'PERFORM FAST REFRESH ON STORE'
0045454	-002- 28 FASTRNC EQU	0(45454)
	-002- 29 FASTRNC TEXT	'FORCE FAST REFRESH W/O CLOCK'
0145454	-002- 30 FFRMB15 EQU	0(145454)
	-002- 31 FFRMB15T TEXT	'FORCE FAST REFRESH & BIT 15'
0146074	-002- 32 FBIT09 EQU	0(146074) # FORCE BIT 09 (COMMON ERROR STROBE) ACTIVE
	-002- 34 FBIT09T TEXT	'COLLECT ERRORS IN STORE ERROR REGISTER'
0146064	-002- 35 FBIT09R EQU	0(146064)
	-002- 36 FBIT09RT TEXT	'COLLECT ERRORS IN SER W/ REFRESH ON'
0146076	-002- 37 FBRMB15 EQU	0(146076)
	-002- 38 FBRMB15T TEXT	'FANOUT BOARD REFRESH W/ ERROR COLLECT'
0046314	-002- 39 FCHKBT EQU	0(46314) # FORCE MAIN SHIFTER CHECK BIT ACTIVE
	-002- 40 FCHKBT TEXT	'ACTIVATE MAIN SHIFTER CHECK BIT'
0046304	-002- 41 FCHKBTR EQU	0(46304)
	-002- 42 FCHKBTRT TEXT	'ACTIVATE SHIFTER CHECK BIT W/ REFRESH ENABLED'
0040574	-002- 43 FCHKDS EQU	0(40574)
	-002- 44 FCHKDST TEXT	'FORCE ZEROS TO MODULE SELECT XOR CHECK & WRITE PROTECT SELECT XOR CHECK CIRCUITS'
0041274	-002- 46 FCHK1S EQU	0(41274)
	-002- 47 FCHK1ST TEXT	'FORCE ONES TO MODULE SELECT XOR CHECK & WRITE PROTECT SELECT XOR CHECK CIRCUITS'
0140574	-002- 49 FCKDS15 EQU	0(140574)

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 19

23:35:52 2/05/81 ****

CDGSFB W770

0141274	-002- 01 FCKOS15T TEXT	'FORCE ZEROS TO CHECK CKTS W/ ERROR COLLECT'
	-002- 02 FCKI15 EQU	0(141274)
	-002- 03 FCKI15T TEXT	'FORCE ONES TO CHECK CKTS W/ ERROR COLLECT'
0043074	-002- 04 FDISIDLE EQU	0(43074)
	-002- 05 FDISIDLET TEXT	'FORCE DISABLE OF IDLE FLOP'
0046156	-002- 06 FLSHD EQU	0(46156) # FORCE LOAD THE SHIFTER WITH ZERO (W/CLOCK)
	-002- 08 FLSHOT TEXT	'START ZERO INTO MAIN SHIFTER'
0046154	-002- 09 FLSHONC EQU	0(46154) # PUT ZERO ON INPUT OF SHIFTER (W/O CLOCK)
	-002- 11 FLSHONCT TEXT	'PRESENT ZERO TO INPUT OF MAIN SHIFTER'
0045434	-002- 12 FNOWRT EQU	0(45434)
	-002- 13 FNOWRTT TEXT	'FORCE WRITING OF ALL-ONES DATA'
0045430	-002- 14 FNOWRTC EQU	0(45430)
	-002- 15 FNOWRCT TEXT	'FORCE WRITING OF ONES W/ CLOCK RUNNING'
0044474	-002- 16 FNOTIM EQU	0(44474) # DISABLE TRANSMISSION OF TIMING SIGNALS TO FANOUT BOARDS
	-002- 18 FNOTIMT TEXT	'INHIBIT TIMING SIGNALS TO FANOUT BOARDS'
0044470	-002- 19 FNOTIMC EQU	0(44470)
	-002- 20 FNOTIMCT TEXT	'BLOCK TIMING TO FANOUT BOARDS (W/CLOCK)'
0041550	-002- 21 FOMBT EQU	0(41550)
	-002- 22 FOMBTI TEXT	'FANOUT BOARD MAINTENANCE TEST'
0041474	-002- 23 FRFSEL0 EQU	0(41474) # FORCE REFRESH SELECT SIGNAL FROM FOB0
	-002- 24 FRFSEL0T TEXT	'CANCEL SELECT FROM FOB0 DURING REFRESH'
0042334	-002- 25 FRFSEL1 EQU	0(42334) # FORCE REFRESH SELECT SIGNAL FROM FOB1
	-002- 26 FRFSEL1T TEXT	'CANCEL SELECT FROM FOB1 DURING REFRESH'
0042534	-002- 27 FRFSEL2 EQU	0(42534) # FORCE REFRESH SELECT SIGNAL FROM FOB2
	-002- 28 FRFSEL2T TEXT	'CANCEL SELECT FROM FOB2 DURING REFRESH'
0043234	-002- 29 FRFSEL3 EQU	0(43234) # FORCE REFRESH SELECT SIGNAL FROM FOB3
	-002- 30 FRFSEL3T TEXT	'CANCEL SELECT FROM FOB3 DURING REFRESH'
0043434	-002- 31 FRFSEL4 EQU	0(43434) # FORCE REFRESH SELECT SIGNAL FROM FOB4
	-002- 32 FRFSEL4T TEXT	'CANCEL SELECT FROM FOB4 DURING REFRESH'
004354	-002- 33 FRFSEL5 EQU	0(44354) # FORCE REFRESH SELECT SIGNAL FROM FOB5
	-002- 34 FRFSEL5T TEXT	'CANCEL SELECT FROM FOB5 DURING REFRESH'
0044554	-002- 35 FRFSEL6 EQU	0(44554) # FORCE REFRESH SELECT SIGNAL FROM FOB6
	-002- 36 FRFSEL6T TEXT	'CANCEL SELECT FROM FOB6 DURING REFRESH'
0045254	-002- 37 FRFSEL7 EQU	0(45254) # FORCE REFRESH SELECT SIGNAL FROM FOB7
	-002- 38 FRFSEL7T TEXT	'CANCEL SELECT FROM FOB7 DURING REFRESH'
0044334	-002- 39 FRREQA EQU	0(44334) # SET REFRESH REQUEST FLOP (OFFRREQ) ON TIMING BOARD (FA1071)
	-002- 41 FRREQAT TEXT	'SET REFRESH REQUEST ON TIMING BOARD (FA1071)'
0040674	-002- 42 FRREQB EQU	0(40674) # SET REFRESH REQUEST FLOP (RREQB) ON CHECK BOARD A (FA1062)
	-002- 44 FRREQBT TEXT	'SET REFRESH REQ COPY ON CHECK BOARD A (FA1062)'
0040664	-002- 45 FRREQB EQU	0(40664)
	-002- 46 FRREQBT TEXT	'SET REFRESH REQUEST ON FA1062 W/ REFRESH ENABLE'
0046074	-002- 47 FSEL4 EQU	0(46074)
	-002- 48 FSELAT TEXT	'FORCE STORE SELECT (ISOLATE) SIGNAL ON FA1071'
0006074	-002- 49 NSEL4 EQU	0(6074)

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 20

23:35:52 2/05/81 ****

C06SFB W77D

```

0004714 -002- 01 NSELAT TEXT 'RESET STORE SELECT(ISOLATE) SIGNAL ON FA1071'
-002- 02 FSELB EQU O(4714) # FORCE STORE SELECT (TDBSEL) FROM CHECK
                                BOARD A (FA1062)
0004710 -002- 04 FSELBT TEXT 'FORCE DUPLICATED STORE SELECT(SELB) ACTIVE'
-002- 05 FSELBC EQU O(4710)
0046516 -002- 06 FSELBC TEXT 'FORCE DUPLICATED STORE SELECT(SELB) W/ CLOCK'
-002- 07 FSTFBRM EQU O(46516)
0042354 -002- 08 FSTFBRMT TEXT 'FORCE CONTROLLER & FANOUT BOARDS TO REFRESH'
-002- 09 FSTNM EQU O(42354) # FORCE MODE FLOP TO NORMAL STATE
0052354 -002- 10 FSTNMT TEXT 'FORCE MODE FLOP TO NORMAL STATE'
-002- 11 FSTNMFR EQU O(52354)
-002- 12 FSTNMFR TEXT 'FORCE NORMAL MODE IN CONTROLLER & REFRESH TO FANOUT BOARDS'
0042344 -002- 13 FSTNMFR EQU O(42344)
-002- 14 FSTNMFR TEXT 'FORCE MODE TO NORMAL W/ REFRESH ENABLED'
0046514 -002- 15 FSTRM EQU O(46514) # FORCE MODE FLOP TO REFRESH STATE
-002- 16 FSTRMT TEXT 'FORCE MODE FLOP TO REFRESH STATE'
0046234 -002- 17 FTINWP EQU O(46234)
-002- 18 FTINWP TEXT 'FORCE IN-WRITE-PROTECT INHIBIT'
0006220 -002- 19 IOGO EQU O(6220)
-002- 20 IOGOT TEXT 'ENABLE ON-LINE I/O ACCESS TO OFF-LINE STORE'
0125252 -002- 21 IOTSTA EQU O(125252)
-002- 22 IOTSTAT TEXT 'I/O TEST PATTERN #1'
0052525 -002- 23 IOTST5 EQU O(52525)
-002- 24 IOTST5 TEXT 'I/O TEST PATTERN #2'
0067214 -002- 25 ISOCHK EQU O(67214) # CHECK ISOLATION FROM HIGHER STORES -
                                PUT RESULTS OF TEST INTO STORE ERROR
                                REGISTER (SER)
0027214 -002- 28 ISOCHKT TEXT 'ISOLATE FROM FAR STORES & VERIFY VIA SER'
-002- 29 ISOCHKU EQU O(27214)
0043454 -002- 30 ISOCHKUT TEXT 'APPLY ONES TO STORE DATA BUS(W/O ISOLATE)'
-002- 31 KILL12 EQU O(43454) # WIPE OUT SHIFTER BIT AT POSITION 12
-002- 32 KILL12T TEXT 'CLEAR SHIFTER BIT IN POSITION 12'
0046071 -002- 33 MASCINT EQU O(46071)
-002- 34 MASCINTT TEXT 'INITIALIZE STORE CONTROLLER'
0006071 -002- 35 MSCINTS EQU O(6071)
-002- 36 MSCINTST TEXT 'INITIALIZE STORE CONTROLLER W/O FORCE SELECT'
0046076 -002- 37 MASCLK EQU O(46076) # ACTIVATE STORE CONTROLLER CLOCK (CK)
                                SIGNAL
0046074 -002- 39 MASCLKT TEXT 'FAKE FIRST HALF OF STORE CLOCK CYCLE'
-002- 40 MASCLKN EQU O(46074)
0047410 -002- 41 MASCLKNT TEXT 'FAKE SECOND HALF OF STORE CLOCK CYCLE'
-002- 42 RDAD EQU O(47410)
-002- 43 RDADT TEXT 'GATE STORE ADDRESS BUS(SA0-16,PL) TO STORE DATA BUS(SD0-15,PL,PH)
                                W/ CLOCK'
0047414 -002- 45 RDADNC EQU O(47414)
-002- 46 RDADNCT TEXT 'GATE STORE ADDRESS BITS TO STORE DATA BUS'
0006070 -002- 47 REFSTOP EQU O(6070)
-002- 48 REFSTOPT TEXT 'INHIBIT REFRESHING OF STORE'
0006060 -002- 49 REFSTRT EQU O(6060)

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-S0

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET C06SFB ISSUE 05 PAGE 21

23:35:52 2/05/81 ****

CDGSFB W77D

```

-002- 01 REFSTATT TEXT 'RESUME REGULAR REFRESHING OF STORE'
0046060 -002- 02 RFWISOL EQU 0(46060)
-002- 03 RFWISOLT TEXT 'RESUME REGULAR REFRESH W/ STORE ISOLATED'
0047214 -002- 04 RTNADHI EQU 0(47214) # RETURN UPPER ADDRESS (SA16-19) BITS &
# SELECTED CONTROL SIGNALS VIA I/O CHANNEL

-002- 06 RTNADHIT TEXT 'LOAD SA17 & SAPH INTO SER'
0044714 -002- 07 SPAREA EQU 0(44714)
-002- 08 SPAREAT TEXT 'SPARE I/O ORDER'
0047114 -002- 09 SERREAD EQU 0(47114) # STORE ERROR REGISTER (SER) READ
-002- 10 SERREADT TEXT 'READ BACK STORE ERROR REGISTER(SER)'
0041634 -002- 11 STSBY EQU 0(41634)
-002- 12 STSBYT TEXT 'SET STORE BUSY(SBY) SIGNAL'
0041630 -002- 13 STSBYCL EQU 0(41630)
-002- 14 STSBYCLT TEXT 'SET STORE BUSY(SBY) W/ CLOCK'
0007114 -002- 15 USERRED EQU 0(7114)
-002- 16 USERREDT TEXT 'READ STORE ERROR REG (W/O ISOLATE)'
0046061 -002- 17 WPCLR EQU 0(46061)
-002- 18 WPCLRT TEXT 'STORE INITIALIZE, INCL. WRITE PROTECT'
0052354 -002- 19 D1ONOR EQU 0(52354) # FORCE 0-10 (D10TIM) SIGNAL & RESET
# REFRESH REQUEST FLOP

-002- 21 D1ONORT TEXT '0-10 TIMING(D10TIM)THEN REFRESH REQUEST CLEAR'
0054334 -002- 22 D1OREF EQU 0(54334) # FORCE 0-10 (D10TIM) SIGNAL & SET
# REFRESH REQUEST FLOP

-002- 24 D1OREFT TEXT '0-10 TIMING(D10TIM)THEN REFRESH REQUEST SET'
0056074 -002- 25 D1OTIM EQU 0(56074)
-002- 26 D1OTIMT TEXT 'FORCE 0-10 TIMING SIGNAL ACTIVE'

```

-002- 33 # STORE MAINTENANCE ORDER OPTIONS:

```

0010000 -002- 36 FAKD10 EQU 0(10000) # FAKE 0-10 TIMING SIGNAL
-002- 37 # NOTE: NEXT OPTION BIT IS SHARED
0020000 -002- 38 FBUSRDN EQU 0(20000) # FORCE BUS READ INACTIVE TO BIT-SLICES
0020000 -002- 39 LOADCHK EQU 0(20000) # LOAD I/O ORDER CHECK RESULTS
0040000 -002- 40 ISOLATE EQU 0(40000) # ISOLATE THIS STORE FROM HIGHER STORES
0100000 -002- 41 FSBIT09 EQU 0(100000) # FORCE SHIFTER BIT 09 ACTIVE
0000001 -002- 42 INITBIT EQU 0(1) # INITIALIZE STORE CONTROLLER
0000002 -002- 43 # NOTE: NEXT OPTION BIT IS SHARED
-002- 44 FFORM EQU 0(2) # FORCE FANOUT BOARDS TO REFRESH MODE
0000002 -002- 45 STEPCLK EQU 0(2) # HALF-CYCLE OF STORE CLOCK
0000004 -002- 46 HALTCLK EQU 0(4) # DISABLE STORE CONTROLLER CLOCK
0000010 -002- 47 STOPREF EQU 0(10) #DISABLE AUTONOMOUS REFRESH

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 22

23:35:52 2/05/81 ****

CDG5FB

W77D

0177771 -002- 01 CLOCKON EQU 0(177771)
0020016 -002- 02 FGLDNCFR EQU 0(20016)

MASK OUT CLOCK OFF OPTIONS
LOAD I/O ORDER CHECK RESULTS WITH CLOCK
STOPPED AND FANOUT BOARDS IN REFRESH
MODE

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 23

TEST 45

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 45, MAIN_STORE_FANOUT_BOARD
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

```

0022600

-001- 10 CSTFB5 CSECT

0022600 01 000000 000145 ----- CDGNM

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN

```

18 # SEGMENT 1
19 # THIS SEGMENT PARTIALLY EXERCISES THE STORE ADDRESS PARITY CHECK CIRCUITS
20 # ON ALL EQUIPPED FANOUT BOARDS. AN ALL-ONES PATTERN, B(1111111111111111), IS
21 # APPLIED THRU SPECIFIC STORE ADDRESS BITS (SA0-14). STORE-SELECT AND MODULE-
22 # SELECT BITS ARE CHECKED ON EACH FANOUT BOARD ONLY IN THE STATES THEY WOULD
23 # NORMALLY ASSUME. THE FANOUT-BOARD-PARITY-ERROR BIT IN THE STORE ERROR REGISTER
24 # COMBINES ERROR INDICATIONS FROM THE ADDRESS PARITY LOW CHECK (SA0-7,PL) AND
25 # THE ADDRESS PARITY HIGH CHECK (SA8-19,PH) CIRCUITS. FIRST, THE PARITY LOW
26 # CHECK CIRCUIT IN EACH EQUIPPED FANOUT BOARD IS EXERCISED WHILE THE PARITY OVER
27 # THE HIGH BITS IS HELD GOOD FOR THE PARTICULAR STORE UNDER TEST. THE ADDRESS
28 # PARITY LOW BIT SPECIFIED SHOULD PRODUCE NO ADDRESS PARITY ERROR FOR EACH
29 # EQUIPPED FANOUT BOARD. THIS IS FOLLOWED BY A SIMILAR TESTING OF THE PARITY
30 # HIGH CHECK CIRCUIT DURING WHICH THE PARITY OVER THE LOW ADDRESS BITS IS HELD
31 # GOOD. HOWEVER, IN THIS EXERCISE THE PARITY HIGH BIT IS HELD CONSTANT SO THAT
32 # THE RESULTING PATTERN OF ADDRESS PARITY (HIGH) ERRORS FROM THE FANOUT BOARDS
33 # MUST BE COMPARED WITH THE RESULTS EXPECTED FOR THE PARTICULAR STORE UNDER
34 # TEST. IF THERE ARE ANY MISMATCHES BETWEEN THE TWO PATTERNS, THEN A FAULT IN
35 # THE ADDRESS PARITY HIGH CHECK CIRCUIT IS INDICATED.

```

```

38 # SEGMENT 2
39 # THIS SEGMENT PARTIALLY EXERCISES THE STORE ADDRESS PARITY CHECK CIRCUITS
40 # ON ALL EQUIPPED FANOUT BOARDS. THE TEST PATTERN B(0100010001000100) IS
41 # APPLIED THRU SPECIFIC STORE ADDRESS BITS (SA0-14). STORE-SELECT AND MODULE-
42 # SELECT BITS ARE CHECKED ON EACH FANOUT BOARD ONLY IN THE STATES THEY WOULD
43 # NORMALLY ASSUME. THE FANOUT-BOARD-PARITY-ERROR BIT IN THE STORE ERROR REGISTER
44 # COMBINES ERROR INDICATIONS FROM THE ADDRESS PARITY LOW CHECK (SA0-7,PL) AND
45 # THE ADDRESS PARITY HIGH CHECK (SA8-19,PH) CIRCUITS. FIRST, THE PARITY LOW
46 # CHECK CIRCUIT IN EACH EQUIPPED FANOUT BOARD IS EXERCISED WHILE THE PARITY OVER
47 # THE HIGH BITS IS HELD GOOD FOR THE PARTICULAR STORE UNDER TEST. THE ADDRESS
48 # PARITY LOW BIT SPECIFIED SHOULD PRODUCE AN ADDRESS PARITY ERROR FOR EACH
49 # EQUIPPED FANOUT BOARD. THIS IS FOLLOWED BY A SIMILAR TESTING OF THE PARITY

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 24

TEST 45

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

01 # HIGH CHECK CIRCUIT DURING WHICH THE PARITY OVER THE LOW ADDRESS BITS IS HELD
02 # GOOD. HOWEVER, IN THIS EXERCISE THE PARITY HIGH BIT IS HELD CONSTANT SO THAT
03 # THE RESULTING PATTERN OF ADDRESS PARITY (HIGH) ERRORS FROM THE FANOUT BOARDS
04 # MUST BE COMPARED WITH THE RESULTS EXPECTED FOR THE PARTICULAR STORE UNDER
05 # TEST. IF THERE ARE ANY MISMATCHES BETWEEN THE TWO PATTERNS, THEN A FAULT IN
06 # THE ADDRESS PARITY HIGH CHECK CIRCUIT IS INDICATED.

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 25

TEST 45

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

01 CSTFB5 OW 0(1),0(16) # 12705
-001- 02 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000001 *****

0022601
0022601 01 000001 000144 ----- CDGNM
-002- 05 FB5INIT PREPARE
-002- 06 # RTN BLM
-002- 07 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-002- 08 VFD 1,0 2,0 6,0 1,1 6,NRTNBLM

-002- 10 # SEND
-002- 11 # SEND 0(00000001) TO OFF-LINE MCHB.
-002- 12 # PARITY IS 0(2).
0022602 01 000002 047707 ----- CDGNM
-002- 13 VFD 1,0 2,2 7,8(0111111) 6,N2SEND
0022603 01 000003 000040 000001
-002- 14 ADDR 0(00000001),0(2)

-002- 16 # MICRO
-002- 17 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 18 # TO FIELD = MSXT FROM FIELD = MCHBXF
0022605 01 000005 020005 ----- CDGNM
-002- 19 VFD 1,0 2,1 7,0 6,NMICRO
0022606 01 000006 106631 -----
-002- 20 VFD 8,MSXT 8,MCHBXF

-002- 22 # NO3 CODE
-002- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0022607 01 000007 040043 000000 CDGNM
0022610 01 000010 000000 022612 0022612
-002- 24 VFD 1,0 2,2 7,0 6,NNO3CD
-002- 25 ADDR **2

-001- 27 # SUBSTITUTE 'HAS' FOR 'LOOP' IN TROUBLE PRINTOUT
-002- 28 LI R4,MXAS
-001- 29 STL R4,PAGSCR+24
0022612 01 000012 103501 000151 TTYTBL
0022614 01 000014 034500 043132 CTSB
-001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
-001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
-001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(I0ADDR) IN PAGING BUFFER(PAGSCR)

0022616 01 000016 103240 -----
0022617 01 000017 004257 -----
-001- 34 ZR LOOPIND
-001- 35 SN LOOPIND,1 #ASSURE THAT LOOPIND IS ZERO BEFORE
#PROCEEDING WITH TEST

0022620 01 000020 072652 ----- CDGNM
0022621 01 000021 037020 012757 CDGSIO
-001- 37 HN LOOPIND,LOOPIND
-002- 38 BSA CONTPREP
0022623 01 000023 172652 ----- CDGNM
-001- 39 HN LOOPIND,LOOPIND
0022624 01 000024 137020 012667 CDGSIO
-003- 40 BSA MASIOM
0022626 01 000026 046071 -----
-002- 41 DATA MASCINT # INITIALIZE STORE CONTROLLER

0022627 01 000027 171400 -----
-002- 43 GA
0022630 01 000030 031000 022634 0022634
-002- 44 LAL RD,**4,RAD
0022632 01 000032 037000 011162 CDGNM
-002- 45 BL INTRPN03

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSFB

ISSUE 05

PAGE 26

TEST 45

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

0022634

01
-001- 02EOW
NOTE

12705

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 27

TEST 45 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 45 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

0022634 01 000034 000100 ----- CDGMN -001- 08 VFD 1,0 2,0 2,0 5,D(1) 6,NTESTSEG

```

11 # THIS SEGMENT PARTIALLY EXERCISES THE STORE ADDRESS PARITY CHECK CIRCUITS
12 # ON ALL EQUIPPED FANOUT BOARDS. AN ALL-ONES PATTERN, B(11111111111111), IS
13 # APPLIED THRU SPECIFIC STORE ADDRESS BITS (SAD-14). STORE-SELECT AND MODULE-
14 # SELECT BITS ARE CHECKED ON EACH FANOUT BOARD ONLY IN THE STATES THEY WOULD
15 # NORMALLY ASSUME. THE FANOUT-BOARD-PARITY-ERROR BIT IN THE STORE ERROR REGISTER
16 # COMBINES ERROR INDICATIONS FROM THE ADDRESS PARITY LOW CHECK (SAD-7,PL) AND
17 # THE ADDRESS PARITY HIGH CHECK (SAD-19,PH) CIRCUITS. FIRST, THE PARITY LOW
18 # CHECK CIRCUIT IN EACH EQUIPPED FANOUT BOARD IS EXERCISED WHILE THE PARITY OVER
19 # THE HIGH BITS IS HELD GOOD FOR THE PARTICULAR STORE UNDER TEST. THE ADDRESS
20 # PARITY LOW BIT SPECIFIED SHOULD PRODUCE NO ADDRESS PARITY ERROR FOR EACH
21 # EQUIPPED FANOUT BOARD. THIS IS FOLLOWED BY A SIMILAR TESTING OF THE PARITY
22 # HIGH CHECK CIRCUIT DURING WHICH THE PARITY OVER THE LOW ADDRESS BITS IS HELD
23 # GOOD. HOWEVER, IN THIS EXERCISE THE PARITY HIGH BIT IS HELD CONSTANT SO THAT
24 # THE RESULTING PATTERN OF ADDRESS PARITY (HIGH) ERRORS FROM THE FANOUT BOARDS
25 # MUST BE COMPARED WITH THE RESULTS EXPECTED FOR THE PARTICULAR STORE UNDER
26 # TEST. IF THERE ARE ANY MISMATCHES BETWEEN THE TWO PATTERNS, THEN A FAULT IN
27 # THE ADDRESS PARITY HIGH CHECK CIRCUIT IS INDICATED.

```

```

-001- 29 # NO3 CODE
-001- 30 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBPARCKD.
0022635 01 000035 040043 000000 CDGMN -001- 31 VFD 1,0 2,2 7,0 6,NN03CD
0022636 01 000036 000000 022640 0022640 -001- 32 ADDR FBPARCKD

```

34 # TEST PARITY LOW CHECK CKT FIRST - INSURE THAT PARITY HIGH IS ALWAYS OK

```

0022640 36 FBPARCKD
0022640 37 CALL FOBNDX # LOAD NUMBER OF EQUIPPED FOB'S INTO 'FOBCNT'
0022640 01 000040 137020 013166 CDGSFA -001- 39 BSA FOBNDX # CLEAR ERROR STORAGE REG
0022642 01 000042 103100 ----- 40 ZR R4
0022643 01 000043 030700 043140 CTSD 41 LL R12,BASADDR
0022645 01 000045 003761 000226 42 LI R15,B(10010110)
43 # THIS REPRESENTS PROPER ADDRESS PARITY HIGH FOR STORES 0 & 3 - MODS 0-7
44 STR12ST FBPATLDO
0022647 -001- 45 # COMPLEMENT THIS PATTERN IF EITHER STORE 1 OR 2 IS CURRENTLY UNDER TEST
-001- 46 LL R3,STSELMSK
0022651 01 000051 006123 ----- -001- 47 LR R5,R3 # SAVE STORE SELECT MASK
0022652 01 000052 014074 ----- -001- 48 NR R3,R12 # IS THIS STORE 0?
0022653 01 000053 054004 ----- 0022657 -001- 49 BC FBPATLDO # IF SO, EXIT FROM THIS TEST

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-S0

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 28

TEST 45 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

0022654 01 000054 015123 ----- -001- 01   XR    R5,R3           # IS THIS STORE 3?
0022655 01 000055 054002 ----- -001- 02   BC    FBPATLDD        # IF SO, EXIT FROM THIS TEST
0022656 01 000056 015777 ----- -001- 03   COM   R15
                                -001- 04 # COMPLEMENT IS PROPER ADDRESS PARITY HIGH CHECK RESULT FOR STORES 1 & 2

0022657                                06 FBPATLDD
0022657 01 000057 103120 ----- 07   ZR    R5           # ZERO LOOP COUNT
0022660 01 000060 003145 ----- 08   LN    R6,PRHOL1      # INITIALIZE SPECIAL PARITY REG
0022661 01 000061 030720 012753 CDGSIO 09   LL    R15,MDELSMSK
                                10 CSTFB5 OW 0(C53)           # 12989
                                -001- 11 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000063 *****

0022663 01 000063 037000 115102 0000007 -001- 14 CPATCH3 BGNP 0(C07)           # 12989
                                -001- 15 BL    XXX324
                                -001- 16 NOTE CPATCH3 'CSECT'
                                -001- 17 NOTE ***** PATCH AREA BEGINS AT 000007 *****

0115102                                -001- 20 XXX324 PATCHAREA
0115102 10 000007 115735 ----- 21   COM   R13
0115103                                22
0115103 10 000010 003340 ----- 23   ZR    R14           # ALL ONES IN FIRST MEMORY MOD.
0115104                                24
0115104                                25 CALL WAIT           # START WITH ZERO INCREMENT
0115104 10 000011 073025 ----- -001- 26 BSAI WXAII      # TAKE A REAL TIME BREAK
0115105                                27 ENDP           # SUBROUTINE WAIT IS IN PROGRAM CBLM
0115105 10 000012 137000 022665 0000065 -001- 28 BL    XXX327           # 12989
                                -001- 29 NOTE ***** LAST PATCH ADDRESS USED IS 000013 *****
                                -001- 30 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0022665                                -001- 33 XXX327 OVCONTINUE
0022665                                34 EOV           # 12989
                                -001- 35 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000064 *****

0022665                                38 FBPCLPD
0022665                                39 SIOH MASCINT
0022665 01 000065 137020 012667 CDGSIO -002- 40 BSA MASIOM
0022667 01 000067 046071 ----- -001- 41 DATA MASCINT           # INITIALIZE STORE CONTROLLER
0022670 01 000070 122141 ----- 42   ZBN R6,1           # CLEAR SPECIAL PARITY HIGH
0022671 01 000071 024765 ----- 43   TBR R15,R5         # GET PARITY HIGH FOR THIS MOD
0022672 01 000072 055002 ----- 44   BNC FBNDADO        # SKIP AHEAD IF PARITY HIGH = D
0022673 01 000073 026141 ----- 45   SBN R6,1           # SET SPECIAL PARITY HIGH
                                46 # THE PRECEDING ROUTINE GUARANTEES THAT PARITY LOW CHECK CKT FAULTS WILL NOT BE
                                47 # MASKED BY THE PARITY HIGH CHECK CKT

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 29

TEST 45 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

0022674
0022674 01 000074 101736 ----- 01 FBSNBADO
0022675 01 000075 055002 ----- 02 AR R13,R14 # INCREMENT MODULE INDEX
0022676 01 000076 004701 ----- 03 BNC NOCARRY
0022677 01 000077 130740 012754 CD6SIO 04 AN R12,1 # INCREMENT UPPER MODULE INDEX
0022677 01 000077 130740 012754 CD6SIO 05 NOCARRY
0022677 01 000077 130740 012754 CD6SIO 06 LL R14,M00SIZE # MEMORY MODULE INCREMENT
0022701 01 000101 003561 106260 -001- 07 NMLREAD RAO,N0SPAR
0022703 01 000103 006054 ----- -001- 08 LI R7,B(1000110010110000) # MAIN MEMORY STATUS
0022704 01 000104 006075 ----- -001- 09 LR R2,R12
0022705 01 000105 037020 013027 CD6SBS -001- 10 LR R3,R13
0022707 01 000107 137020 012667 CD6SIO -002- 11 BSA MEMOP
0022711 01 000111 047114 ----- -002- 12 SRIO SERREAD
0022712 01 000112 124270 ----- -002- 13 BSA MASIO # READ BACK STORE ERROR REGISTER(SER)
0022713 01 000113 055002 ----- -001- 14 DATA SERREAD
0022714 01 000114 026505 ----- 15 TBN R11,S(F0BPARER)
0022715 01 000115 045521 ----- 16 BNC FBPCJPD # SET BIT FOR PARITY ERROR
0022715 01 000115 045521 ----- 17 SBR R4,R5
0022716 01 000116 020130 ----- 18 FBPCJPD
0022717 01 000117 055746 ----- 19 AN R5,1 # INCREMENT LOOP COUNT
0022720 01 000120 007464 ----- 20 CR R5,F0BCNT # LAST FANOUT BOARD TO BE TESTED?
0022721 01 000121 071400 ----- 21 BNC FBPCJPD # IF NOT, RETURN
0022722 01 000122 031000 022726 CD6NM 22 LSR MCHB,R4 # IF SO, PREPARE FOR COMPARE'S
0022724 01 000124 037000 011162 CD6NM 23 RTN_TBL **4
0022724 01 000124 037000 011162 CD6NM -001- 24 GA
-001- 25 LAL R0,**4,RAO
-001- 26 BL INTRPN03
-001- 28 # TTY_DATA
-001- 29 # STORE CONTENTS OF ON-LINE MCHB AS A DATA WORD FOR TTY FAILURE MESSAGE.
0022726 01 000126 000016 ----- CD6NM -001- 30 VFD 1,0 2,0 4,0 1,0 1,1-1 1,0 6,NTTY
-001- 32 # SET BIT INDICATES FANOUT BOARD WITH FAULTY PARITY CHECK CKT
-001- 33 # COMPARE
-001- 34 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(00000000).
0022727 01 000127 050014 ----- CD6NM -001- 35 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0022730 01 000130 000000 000000 -001- 36 VFD 1,1,PN0Y 2,2 1,1 1,SUCCES 5,0 6,NCOMPARE
-001- 37 ADDR 0(00000000)
-001- 39 # FAILBIT
-001- 40 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS PARF0BXX
-001- 41 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0022732 01 000132 020120 ----- CD6NM -001- 42 VFD 1,0 2,1 5,0 2,1 6,NFLBITS
0022733 01 000133 000002 ----- -001- 43 VFD 16,PARF0B

```

45 # FAULT IN ADDRESS PARITY LOW CHECK CKT ON A FANOUT BOARD WITH ADDRESS = X(FF)

STORE FANOUT BOARDS TEST-PART B

PR-1c926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 30

TEST 45 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB

W77D

```

-001- 01 # NO3 CODE
-001- 02 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBPARCK1.
-001- 03 VFD 1,0 2,2 7,0 6,NNO3CD
-001- 04 ADDR FBPARCK1
0022734 01 000134 040043 000000 CDG5NM
0022735 01 000135 000000 022737 0022737

```

06 # TEST PARITY HIGH CHECK CKT NEXT - INSURE THAT PARITY LOW IS ALWAYS OK

```

0022737 10 FBPARCK1
0022737 11 CALL FORNDX
0022737 01 000137 137020 013166 CDG5FA -001- 12 BSA FORNDX
0022741 01 000141 103120 ----- 13 ZR R5 # ZERO LOOP COUNT
0022742 01 000142 003100 ----- 14 ZR R4 # CLEAR ERROR STORAGE REG
0022743 01 000143 030700 043140 CTSD 15 LL R12,BASADDR
0022745 01 000145 030720 012753 CDG5IO 16 LL R13,MOSELMSK
17 CSTFB5 OM O(147) # 12989
-001- 18 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000147 *****

```

```

0022747 01 000147 037000 115107 0000014 -001- 21 CPATCH3 BGMP O(14) # 12989
-001- 22 BL XXX346
-001- 23 NOTE CPATCH3 'CSECT'
-001- 24 NOTE ***** PATCH AREA BEGINS AT 000014 *****

```

```

0115107 -001- 27 XXX346 PATCHAREA
0115107 10 000014 115735 ----- 28 COM R13
0115110 29
0115110 10 000015 003340 ----- 30 ZR R14 # ALL ONES IN FIRST MEMORY MOD.
0115111 31
0115111 10 000016 073025 ----- -001- 32 CALL WAIT # START WITH ZERO INCREMENT
0115111 33 BSAI WXAII # TAKE A REAL TIME BREAK
0115112 34 ENDP # SUBROUTINE WAIT IS IN PROGRAM CBLM
0115112 10 000017 137000 022751 00000151 -001- 35 BL XXX349 # 12989
-001- 36 NOTE ***** LAST PATCH ADDRESS USED IS 000020 *****
-001- 37 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

```

```

0022751 -001- 40 XXX349 OMCONTINUE # 12989
0022751 41 EOV
-001- 42 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000150 *****

```

```

0022751 45 FBPCLP1
0022751 01 000151 101736 ----- 46 AR R13,R14 # INCREMENT MODULE INDEX
0022752 01 000152 035002 ----- 0022754 47 BNC NOCARY1
0022753 01 000153 004701 ----- 48 AN R12,1
0022754 49 NOCARY1 # INCREMENT UPPER MODULE INDEX

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 31

TEST 45 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

0022754 01 000154 130740 012754 CDGSIO	01	LL	R14,MODSIZE	# MODULE INCREMENT
0022756	02	SIOM	MASCINT	
0022756 01 000156 037020 012667 CDGSIO	-002- 03	BSA	MASION	
0022760 01 000160 046071 -----	-001- 04	DATA	MASCINT	# INITIALIZE STORE CONTROLLER
0022761	05	NMLREAD	RA0,PRH11	
0022761 01 000161 103561 106260	-001- 06	LI	R7,B(1000110010110000)	# MAIN MEMORY STATUS
0022763 01 000163 060054 -----	-001- 07	LR	R2,R12	
0022764 01 000164 060075 -----	-001- 08	LR	R3,R13	
0022765 01 000165 003541 000017	-001- 09	LI	R6,PRH11	# SETUP SPECIAL PARITY
0022767 01 000167 037020 013027 CDGSBS	-002- 10	BSA	MEMOP	
0022771	11	SRI0	SERREAD	
0022771 01 000171 137020 012667 CDGSIO	-002- 12	BSA	MASION	
0022773 01 000173 047114 -----	-001- 13	DATA	SERREAD	# READ BACK STORE ERROR REGISTER(SER)
0022774 01 000174 124270 -----	14	TBN	R11,S(F0BPAPER)	
0022775 01 000175 055002 ----- 0022777	15	BNC	F0BCJP1	
0022776 01 000176 026505 -----	16	SBR	R4,R5	# SET BIT FOR PARITY ERROR
0022777	17	FBPCJP1		
0022777 01 000177 104521 -----	18	AN	R5,1	# INCREMENT LOOP COUNT
0023000 01 000200 020130 -----	19	CR	R5,F0BCNT	# LAST FANOUT BOARD TO BE TESTED?
0023001 01 000201 055750 ----- 0022751	20	BNC	F0PCLP1	# IF NOT, RETURN

23 # COMPARE WITH APPROPRIATE RESULTS FOR STORES 0 & 3 OR STORES 1 & 2

0023002 01 000202 003761 000151	25	LI	R15,B(01101001)	
0023004	26	# THIS REPRESENTS PROPER ADDRESS PARITY HIGH CHECK RESULTS FOR STORES 0 & 3		
	27	STR1ZST FBST1		
0023004 01 000204 030460 012756 CDGSIO	-001- 28	# COMPLEMENT THIS PATTERN IF EITHER STORE 1 OR 2 IS CURRENTLY UNDER TEST		
0023006 01 000206 006123 -----	-001- 29	LL	R3,STSELSK	
0023007 01 000207 014074 -----	-001- 30	LR	R5,R3	# SAVE STORE SELECT MASK
0023010 01 000210 054004 ----- 0023014	-001- 31	NR	R3,R12	# IS THIS STORE 0?
0023011 01 000211 015123 -----	-001- 32	BC	F0PATST1	# IF SO, EXIT FROM THIS TEST
0023012 01 000212 054002 ----- 0023014	-001- 33	XR	R5,R3	# IS THIS STORE 3?
0023013 01 000213 015777 -----	-001- 34	BC	F0PATST1	# IF SO, EXIT FROM THIS TEST
	-001- 35	COM	R15	
	-001- 36	# COMPLEMENT IS PROPER ADDRESS PARITY HIGH CHECK RESULT FOR STORES 1 & 2		
0023014	38	F0PATST1		
0023014 01 000214 103060 -----	39	ZR	R3	
0023015 01 000215 004217 -----	40	SN	F0BCNT,1	# SET UP LOOP INDEX
0023016	42	FBNSK1		
0023016 01 000216 126470 -----	43	SBR	R3,F0BCNT	# SET BIT FOR EACH FANOUT BOARD
0023017 01 000217 036200 023016 0023016	44	BX	F0BCNT,FBNSK1	# MASK FOR EQUIPPED FANOUT BOARDS

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 32

TEST 45 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

0023021 01 000221 014363 ----- 01 NR R15,R3 # CLEAR BITS FOR UNEQUIPPED FANOUT BOARDS
0023022 01 000222 015117 ----- 02 XR R4,R15 # COMPARE RESULTS TO EXPECTED PATTERN
0023023 01 000223 007464 ----- 03 LSR MCHB,R4 # PREPARE FOR COMPARE
0023024 ----- 04 RTN_TBL **4
0023024 01 000224 071400 ----- -001- 05 GA #
0023025 01 000225 031000 023031 -001- 06 LAL R0,**4,RA0
0023027 01 000227 037000 011162 CDGNM -001- 07 BL INTRPN03

-001- 09 # TTY_DATA
-001- 10 # STORE CONTENTS OF ON-LINE MCHB AS A DATA WORD FOR TTY FAILURE MESSAGE.
0023031 01 000231 000016 ----- CDGNM -001- 11 VFD 1,0 2,0 4,0 1,0 1,1-1 1,0 6,NTTY

13 # SET BIT INDICATES FANOUT BOARD WITH FAULTY PARITY HIGH CHECK CKT

-001- 15 # COMPARE
-001- 16 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(00000000).
0023032 01 000232 050014 ----- CDGNM -001- 17 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0023033 01 000233 000000 000000 -001- 18 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 19 ADDR 0(000000C)

-001- 21 # FAILBIT
-001- 22 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS PARFOBXX
0023035 01 000235 020120 ----- CDGNM -001- 23 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0023036 01 000236 000002 ----- -001- 24 VFD 1,0 2,1 5,0 2,1 6,NFLBITS
-001- 25 VFD 16,PARFOB

27 # FAULT IN ADDRESS PARITY HIGH CHECK CKT ON A FANOUT BOARD WITH ADDRESS=X(FFFF)

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 33

TEST 45 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 45 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

```

0023037 01 000237 000200 ----- CDG5NM -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTESTSEG

```

```

11 # THIS SEGMENT PARTIALLY EXERCISES THE STORE ADDRESS PARITY CHECK CIRCUITS
12 # ON ALL EQUIPPED FANOUT BOARDS. THE TEST PATTERN B(0100010001000100) IS
13 # APPLIED THRU SPECIFIC STORE ADDRESS BITS (SA0-14). STORE-SELECT AND MODULE-
14 # SELECT BITS ARE CHECKED ON EACH FANOUT BOARD ONLY IN THE STATES THEY WOULD
15 # NORMALLY ASSUME. THE FANOUT-BOARD-PARITY-ERROR BIT IN THE STORE ERROR REGISTER
16 # COMBINES ERROR INDICATIONS FROM THE ADDRESS PARITY LOW CHECK (SA0-7,PL) AND
17 # THE ADDRESS PARITY HIGH CHECK (SA8-19,PH) CIRCUITS. FIRST, THE PARITY LOW
18 # CHECK CIRCUIT IN EACH EQUIPPED FANOUT BOARD IS EXERCISED WHILE THE PARITY OVER
19 # THE HIGH BITS IS HELD GOOD FOR THE PARTICULAR STORE UNDER TEST. THE ADDRESS
20 # PARITY LOW BIT SPECIFIED SHOULD PRODUCE AN ADDRESS PARITY ERROR FOR EACH
21 # EQUIPPED FANOUT BOARD. THIS IS FOLLOWED BY A SIMILAR TESTING OF THE PARITY
22 # HIGH CHECK CIRCUIT DURING WHICH THE PARITY OVER THE LOW ADDRESS BITS IS HELD
23 # GOOD. HOWEVER, IN THIS EXERCISE THE PARITY HIGH BIT IS HELD CONSTANT SO THAT
24 # THE RESULTING PATTERN OF ADDRESS PARITY (HIGH) ERRORS FROM THE FANOUT BOARDS
25 # MUST BE COMPARED WITH THE RESULTS EXPECTED FOR THE PARTICULAR STORE UNDER
26 # TEST. IF THERE ARE ANY MISMATCHES BETWEEN THE TWO PATTERNS, THEN A FAULT IN
27 # THE ADDRESS PARITY HIGH CHECK CIRCUIT IS INDICATED.

```

```

-001- 31 # NO3 CODE
-001- 32 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBPARCK2.
0023040 01 000240 040043 000000 CDG5NM -001- 33 VFD 1,0 2,2 7,0 6,NN03CD
0023041 01 000241 000000 023043 0023043 -001- 34 ADDR FBPARCK2

36 # TEST PARITY LOW CHECK CKT FIRST - INSURE THAT PARITY HIGH IS ALWAYS OK
0023043 38 FBPARCK2
0023043 39 CALL FOBNDX # LOAD NUMBER OF EQUIPPED FOB'S INTO 'FOBCNT'

0023043 01 000243 137020 013166 CDG5FA -001- 41 BSA FOBNDX
0023045 01 000245 103100 ----- 42 ZR R4 # CLEAR ERROR STORAGE REGISTER
0023046 01 000246 030700 043140 CTSD 43 LL R12,BASADDR # STORE UNDER TEST
0023050 01 000250 003761 000226 44 LI R15,B(10010110)
45 # THESE BITS REPRESENT PROPER ADDRESS PARITY HIGH CHECK RESULTS FOR STORES 0 & 3
0023052 46 STR12ST FBPA1D2
-001- 47 # COMPLEMENT THIS PATTERN IF EITHER STORE 1 OR 2 IS CURRENTLY UNDER TEST
-001- 48 LL R3,STSELMSK
0023054 01 000254 006123 ----- -001- 49 LR R5,R3 # SAVE STORE SELECT MASK

```

STORE FANOUT. BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 34

TEST 45 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

0023055 01 000255 014074 ----- -001- 01 NR R3,R12 # IS THIS STORE 0?
0023056 01 000256 054004 ----- 0023062 -001- 02 BC FBPATL02 # IF SO, EXIT FROM THIS TEST
0023057 01 000257 015123 ----- -001- 03 XR R5,R3 # IS THIS STORE 3?
0023060 01 000260 054002 ----- 0023062 -001- 04 BC FBPATL02 # IF SO, EXIT FROM THIS TEST
0023061 01 000261 015777 ----- -001- 05 COM R15
-001- 06 # COMPLEMENT IS PROPER ADDRESS PARITY HIGH CHECK RESULT FOR STORES 1 & 2

0023062 08 FBPATL02
0023062 01 000262 103120 ----- 09 ZR R5 # ZERO LOOP COUNT
0023063 01 000263 003541 000020 10 LI R6,PRHOLD # INITIALIZE SPECIAL PARITY REG
0023065 01 000265 003721 042104 11 LI R13,X(4444) # LOAD TEST PATTERN
0023067 01 000267 030400 012753 CDGS10 12 LL R0,MDSLSMSK
0023071 01 000271 015400 ----- 13 COM R0 # MASK FOR NON-MOD-SELECT BITS
14 CSTFBS OW O(272) # 12989
-001- 15 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000272 *****

0023072 01 000272 037000 115114 000021 16 CPATCH3 BGNP O(21) # 12989
-001- 19 BL XXX371
-001- 20 NOTE CPATCH3 'CSECT'
-001- 21 NOTE ***** PATCH AREA BEGINS AT 000021 *****

0115114 0115114 10 000021 114320 ----- -001- 24 XXX371 PATCHAREA
0115115 25 NR R13,R0
0115115 10 000022 003340 ----- 26 # ADDRESS FIRST MEMORY MOD.
0115116 27 ZR R14
0115116 28 # START WITH ZERO INCREMENT
0115116 10 000023 073025 ----- -001- 29 CALL WAIT # TAKE A REAL TIME BREAK
0115117 30 BSAI WXAII # SUBROUTINE WAIT IS IN PROGRAM CBLM
0115117 10 000024 137000 023074 0000274 -001- 31 ENDP # 12989
-001- 32 BL XXX374
-001- 33 NOTE ***** LAST PATCH ADDRESS USED IS 000025 *****
-001- 34 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0023074 -001- 37 XXX374 OWCONTINUE
0023074 38 EOW # 12989
-001- 39 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000273 *****

0023074 42 FBPCLP2
0023074 01 000274 101736 ----- 43 AR R13,R14 # INCREMENT MODULE INDEX
0023075 01 000275 055002 ----- 0023077 44 BNC NOCARY2
0023076 01 000276 004701 ----- 45 AN R12,1 # INCREMENT UPPER MOD INDEX
0023077 46 NOCARY2
0023077 01 000277 130740 012754 CDGS10 47 LL R14,MODSIZE # MODULE INCREMENT
0023101 48 SION MASCINT
0023101 01 000301 037020 012667 CDGS10 -002- 49 BSA MASCION

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 35

TEST 45 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

C06SFB .W77D

```

0023103 01 000303 046071 ----- -001- 01 DATA MASCINT # INITIALIZE STORE CONTROLLER
0023104 01 000304 122141 ----- 02 ZBN R5,1 # CLEAR SPECIAL PARITY HIGH
0023105 01 000305 024765 ----- 03 TBR R15,R5 # GET PARITY HIGH FOR THIS MOD
0023106 01 000306 055002 ----- 04 BNC FBNSNDAD2 # SKIP AHEAD IF PARITY HIGH = 0
0023107 01 000307 026141 ----- 05 SBN R6,1 # SET SPECIAL PARITY HIGH
                                06 # THE PRECEDING ROUTINE GUARANTEES THAT PARITY LOW CHECK CKT FAULTS WILL NOT BE
                                07 # MASKED BY THE PARITY HIGH CHECK CKT

0023110
0023110 01 000310 103561 104260 -001- 11 NHLREAD RAO,NOSPAR # MAIN MEMORY STATUS
0023112 01 000312 006054 ----- -001- 12 LR R2,R12
0023113 01 000313 006075 ----- -001- 13 LR R3,R13
0023114 01 000314 037020 013027 C06SBS -002- 14 BSA MEMOP
0023116 01 000316 137020 012667 C06SIO -002- 15 SRILO SERREAD
0023120 01 000320 047114 ----- -001- 16 BSA MASIOH # READ BACK STORE ERROR REGISTER(SER)
0023121 01 000321 124270 ----- -001- 17 DATA SERREAD
0023122 01 000322 055002 ----- 18 TBN R11,S(F0BPARER)
0023123 01 000323 026505 ----- 19 BNC FBPCJP2 # SET BIT FOR PARITY ERROR
0023124 01 000324 104521 ----- 20 SBR R4,R5
0023125 01 000325 020130 ----- 21 FBPCJP2
0023126 01 000326 055746 ----- 22 AN R5,1 # INCREMENT LOOP COUNT
0023127 01 000327 004217 ----- 23 CR R5,F0BCNT # LAST FANOUT BOARD TO BE TESTED?
0023130 01 000330 003060 ----- 24 BNC FBPCLP2 # IF NOT, RETURN
0023131 01 000331 126470 ----- 25 SN F0BCNT,1 # SET UP LOOP INDEX
0023132 01 000332 036200 023131 0023131 26 ZR R3
0023133 01 000333 015463 ----- 27 FBMSK2 # SET BIT FOR EACH EQUIPPED FANOUT BOARD
0023134 01 000334 014503 ----- 28 SBR R3,F0BCNT
0023135 01 000335 007464 ----- 29 BX F0BCNT,FBMSK2
0023136 01 000336 071400 ----- 30 COM R3
0023137 01 000337 071400 ----- 31 OR R4,R3 # SET ALL UNUSED BITS IN ERROR WORD
0023140 01 000340 031000 023144 0023144 32 LSR MCHB,R4 # IF SO, PREPARE FOR COMPARE'S
0023142 01 000342 037000 011162 C06NM -001- 33 RTN_TBL +*+
                                -001- 34 GA
                                -001- 35 LAL R0,+*+,RAO
                                -001- 36 BL INTRPNO3

                                -001- 38 # TTY_DATA
                                -001- 39 # STORE CONTENTS OF ON-LINE MCHB AS A DATA WORD FOR TTY FAILURE MESSAGE.
0023144 01 000344 000016 ----- C06NM -001- 40 VFD 1,0 2,0 4,0 1,0 1,1-1 1,0 6,NTTY

                                42 # SET BITS INDICATE PARITY ERRORS FROM EQUIPPED FANOUT BOARDS - ALL-ONES IS GOOD
                                -001- 43 # COMPARE
                                -001- 44 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
                                -001- 45 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0023145 01 000345 050014 ----- C06NM -001- 46 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0023146 01 000346 000000 177777 -001- 47 ADDR 0(0177777)

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE DATA SECRET RESTRICTIVE NOTICE ON COVER SHEET C06SFB ISSUE 05 PAGE 36

TEST 45 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

-001- 01 #   FAILBIT
-001- 02 #   FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS PARFOBXX
-001- 03 #   WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0023150 01 000350 020120 ----- CDGNM
0023151 01 000351 000002 -----
-001- 04 #   VFD      1,0 2,1 5,0 2,1 6,NFLBITS
-001- 05 #   VFD      16,PARFOB

```

07 # FAULT IN ADDRESS PARITY LOW CHECK CKT ON A FANOUT BOARD WITH ADDRESS = X(4444)

```

-001- 10 #   NO3_CODE
-001- 11 #   PROCESS 3ACC CODED ROUTINE AT ADDRESS FBPARCK3.
0023152 01 000352 040043 000000 CDGNM
0023153 01 000353 000000 023155 0023155
-001- 12 #   VFD      1,0 2,2 7,0 6,NNO3CD
-001- 13 #   ADDR      FBPARCK3

```

17 # TEST PARITY HIGH CHECK CKT NEXT - INSURE THAT PARITY LOW IS ALWAYS OK

```

0023155 . 19 FBPARCK3
0023155 20 CALL F0BNDX
0023155 01 000355 137020 013166 CD6SFA -001- 21 BSA F0BNDX
0023157 01 000357 103120 ----- 22 ZR R5 # ZERO LOOP COUNT
0023160 01 000360 003100 ----- 23 ZR R4 # CLEAR ERROR STORAGE REG
0023161 01 000361 030700 043140 CTSO 24 LL R12,BASADDR
0023163 01 000363 003721 042104 25 LI R13,X(4444) # LOAD TEST PATTERN
0023165 01 000365 030400 012753 CD6SIO 26 LL RD,MOSELSK
0023167 01 000367 015400 ----- 27 COM RO # MASK FOR NON-MOD-SELECT BITS
28 CSTFB5 OW 0(370) # 12989
-001- 29 NOTE ***** THE FIRST ADDRESS OVERRITTEN IS 000370 *****
32 CPATCH3 BGMP 0(26) # 12989
-001- 33 BL XXX393
-001- 34 NOTE CPATCH3 'CSECT'
-001- 35 NOTE ***** PATCH AREA BEGINS AT 000026 *****

```

```

0023170 01 000370 037000 115121 0000026 -001- 32 CPATCH3 BGMP 0(26) # 12989
-001- 33 BL XXX393
-001- 34 NOTE CPATCH3 'CSECT'
-001- 35 NOTE ***** PATCH AREA BEGINS AT 000026 *****
1115121 -001- 38 XXX393 PATCHAREA
1115121 10 000026 114320 ----- 39 NR R13,R0 # ADDRESS FIRST MEMORY MOD.
1115122 40
1115122 10 000027 003340 ----- 41 ZR R14
1115123 42 # START WITH ZERO INCREMENT
1115123 43 CALL WAIT # TAKE A REAL TIME BREAK
1115123 10 000030 073025 ----- -001- 44 BSAI WXAII # SUBROUTINE WAIT IS IN PROGRAM CBLM
1115124 45 ENDP # 12989
1115124 10 000031 137000 023172 0000372 -001- 46 BL XXX396
-001- 47 NOTE ***** LAST PATCH ADDRESS USED IS 000032 *****
-001- 48 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 37

TEST 45 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB W770

0023172 -001- 01 XXX396 OMCONTINUE # 12989
 0023172 02 EOV
 -001- 03 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000371 *****

0023172 06 FBCLP3
 0023172 01 000372 101736 ----- 07 AR R13,R14 # INCREMENT MODULE INDEX
 0023173 01 000373 055002 ----- 08 BNC NOCARY3
 0023174 01 000374 004701 ----- 09 AN R12,1 # INCREMENT UPPER MOD INDEX
 0023175 10 NOCARY3
 0023175 01 000375 130740 012754 CDG5IO 11 LL R14,MODSIZE # MODULE INCREMENT
 0023177 12 SIOM MASCINT
 0023177 01 000377 037020 012667 CDG5IO -002- 13 BSA MASIOM
 0023201 01 000401 046071 ----- -001- 14 DATA MASCINT # INITIALIZE STORE CONTROLLER
 0023202 -001- 15 NMLREAD RAO,PRHOL1
 0023202 01 000402 035561 106260 -001- 16 LI R7,B(1000110010110000) # MAIN MEMORY STATUS
 0023204 01 000404 006054 ----- -001- 17 LR R2,R12
 0023205 01 000405 006075 ----- -001- 18 LR R3,R13
 0023206 01 000406 003541 000005 -001- 19 LI R6,PRHOL1 # SETUP SPECIAL PARITY
 0023210 01 000410 037020 013027 CDG5BS -002- 20 BSA MEMOP
 0023212 21 SRIO SERREAD
 0023212 01 000412 137020 012667 CDG5IO -002- 22 BSA MASTOM
 0023214 01 000414 047114 ----- -001- 23 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
 0023215 01 000415 124270 ----- 24 TBN R11,S(FOBPARER)
 0023216 01 000416 055002 ----- 0023220 25 BNC FBPCJP3
 0023217 01 000417 026505 ----- 26 SBR R4,R5 # SET BIT FOR PARITY ERROR
 0023220 27 FBPCJP3
 0023220 01 000420 104521 ----- 28 AN R5,1 # INCREMENT LOOP COUNT
 0023221 01 000421 020130 ----- 29 CR R5,FOBCNT # LAST FANOUT BOARD TO BE TESTED?
 0023222 01 000422 055750 ----- 0023172. 30 BNC FBCLP3 # IF NOT, RETURN

33 # COMPARE WITH APPROPRIATE RESULTS FOR STORES 0 & 3 OR STORES 1 & 2

0023223 01 000423 003761 000151 35 LI R15,B(01101001)
 0023223 36 # THIS REPRESENTS PROPER ADDRESS PARITY HIGH CHECK RESULTS FOR STORES 0 & 3
 0023225 37 STR12ST FBPATST3
 -001- 38 # COMPLEMENT THIS PATTERN IF EITHER STORE 1 OR 2 IS CURRENTLY UNDER TEST
 0023225 01 000425 030460 012756 CDG5IO -001- 39 LL R3,STSELSK
 0023227 01 000427 006123 ----- -001- 40 LR R5,R3 # SAVE STORE SELECT MASK
 0023230 01 000430 014074 ----- -001- 41 NR R3,R12 # IS THIS STORE 0?
 0023231 01 000431 054004 ----- 0023235 -001- 42 BC FBPATST3 # IF SO, EXIT FROM THIS TEST
 0023232 01 000432 015123 ----- -001- 43 XR R5,R3 # IS THIS STORE 3?
 0023233 01 000433 054002 ----- 0023235 -001- 44 BC FBPATST3 # IF SO, EXIT FROM THIS TEST
 0023234 01 000434 015777 ----- -001- 45 COM R15
 -001- 46 # COMPLEMENT IS PROPER ADDRESS PARITY HIGH CHECK RESULT FOR STORES 1 & 2

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 38

TEST 45 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

0023235          01 FBPATST3
0023235 01 000435 103060 ----- 02 ZR R3
0023236 01 000436 004217 ----- 03 SN F0BCNT,1 # SET UP LOOP INDEX

0023237          05 FBMSK3
0023237 01 000437 126470 ----- 06 SBR R3,F0BCNT # SET BIT FOR EACH FANOUT BOARD
0023240 01 000440 036200 023237 0023237 07 BX F0BCNT,FBMSK3 # MASK FOR EQUIPPED FANOUT BOARDS

0023242 01 000442 014363 ----- 09 NR R15,R3 # CLEAR BITS FOR UNEQUIPPED FANOUT BOARDS
0023243 01 000443 015117 ----- 10 XR R4,R15 # COMPARE RESULTS TO EXPECTED PATTERN
0023244 01 000444 007464 ----- 11 LSR MCHB,R4 # PREPARE FOR COMPARE
0023245          12 RTN_TBL **4
0023245 01 000445 071400 ----- -001- 13 GA
0023246 01 000446 031000 023252 0023252 -001- 14 LAL RD,**4,RAO
0023250 01 000450 037000 011162 CDGNM -001- 15 BL INTRPN03

-001- 17 # TTY_DATA
-001- 18 # STORE CONTENTS OF ON-LINE MCHB AS A DATA WORD FOR TTY FAILURE MESSAGE.
0023252 01 000452 000016 ----- CDGNM -001- 19 VFD 1,0 2,0 4,0 1,0 1,-1 1,0 6,NTTY

21 # SET BIT INDICATES FANOUT BOARD WITH FAULTY PARITY HIGH CHECK CKT

-001- 23 # COMPARE
-001- 24 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 25 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0023253 01 000453 050014 ----- CDGNM -001- 26 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0023254 01 000454 000000 000000 -001- 27 ADDR 0(0000000)

-001- 29 # FAILBIT
-001- 30 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS PARFOBX
-001- 31 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0023256 01 000456 020120 ----- CDGNM -001- 32 VFD 1,0 2,1 5,0 2,1 6,NFLBITS
0023257 01 000457 000002 ----- -001- 33 VFD 16,PARFOB

35 # FAULT IN ADDRESS PARITY HIGH CHECK CKT ON A FANOUT BOARD WITH ADDRESS=X(4444)

-001- 38 # NO3_CODE
-001- 39 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBPCAKXT.
0023260 01 000460 040043 000000 CDGNM -001- 40 VFD 1,0 2,2 7,0 6,NN03CD
0023261 01 000461 000000 023263 0023263 -001- 41 ADDR FBPCAKXT

0023263          43 FBPCAKXT

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 39

TEST 45 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

		01	CSTFBS	OW		O(463),O(465)	# 12705
-001-	02		NOTE			***** THE FIRST ADDRESS OVERWRITTEN IS 000463 *****	
0023263				05	FINALE	FB5INIT	
0023263	01	000463	137020	012771	BSA	FINAL	
0023265	01	000465	137000	022623	BL	BKCSTFBS	
0023267	01	000467	171400	-----	GA		
0023270	01	000470	037000	011725	BL	PASSTST	# TEST COMPLETED
0023270				10	EDW		# 12705
	-001-	11			NOTE	***** THE LAST ADDRESS OVERWRITTEN IS 000471 *****	

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 40

TEST 46

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 46, MAIN_STORE_FANOUT_BOARD
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

```

0023272

-001- 10 CSTFB6 CSECT

0023272 02 000000 000145 ----- CDGMH

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN

```

18 # SEGMENT 1
19 # THIS SEGMENT PARTIALLY EXERCISES THE STORE ADDRESS PARITY CHECK CIRCUITS
20 # ON ALL EQUIPPED FANOUT BOARDS. THE TEST PATTERN B(1001000110010001) IS
21 # APPLIED THRU SPECIFIC STORE ADDRESS BITS (SA0-14). STORE-SELECT AND MODULE-
22 # SELECT BITS ARE CHECKED ON EACH FANOUT BOARD ONLY IN THE STATES THEY WOULD
23 # NORMALLY ASSUME. THE FANOUT-BOARD-PARITY-ERROR BIT IN THE STORE ERROR REGISTER
24 # COMBINES ERROR INDICATIONS FROM THE ADDRESS PARITY LOW CHECK (SA0-7,PL) AND
25 # THE ADDRESS PARITY HIGH CHECK (SA8-19,PH) CIRCUITS. FIRST, THE PARITY LOW
26 # CHECK CIRCUIT IN EACH EQUIPPED FANOUT BOARD IS EXERCISED WHILE THE PARITY OVER
27 # THE HIGH BITS IS HELD GOOD FOR THE PARTICULAR STORE UNDER TEST. THE ADDRESS
28 # PARITY LOW BIT SPECIFIED SHOULD PRODUCE NO ADDRESS PARITY ERROR FOR EACH
29 # EQUIPPED FANOUT BOARD. THIS IS FOLLOWED BY A SIMILAR TESTING OF THE PARITY
30 # HIGH CHECK CIRCUIT DURING WHICH THE PARITY OVER THE LOW ADDRESS BITS IS HELD
31 # GOOD. HOWEVER, IN THIS EXERCISE THE PARITY HIGH BIT IS HELD CONSTANT SO THAT
32 # THE RESULTING PATTERN OF ADDRESS PARITY (HIGH) ERRORS FROM THE FANOUT BOARDS
33 # MUST BE COMPARED WITH THE RESULTS EXPECTED FOR THE PARTICULAR STORE UNDER
34 # TEST. IF THERE ARE ANY MISMATCHES BETWEEN THE TWO PATTERNS, THEN A FAULT IN
35 # THE ADDRESS PARITY HIGH CHECK CIRCUIT IS INDICATED.

```

```

38 # SEGMENT 2
39 # THIS SEGMENT PARTIALLY EXERCISES THE STORE ADDRESS PARITY CHECK CIRCUITS
40 # ON ALL EQUIPPED FANOUT BOARDS. THE TEST PATTERN B(0010101000101010) IS
41 # APPLIED THRU SPECIFIC STORE ADDRESS BITS (SA0-14). STORE-SELECT AND MODULE-
42 # SELECT BITS ARE CHECKED ON EACH FANOUT BOARD ONLY IN THE STATES THEY WOULD
43 # NORMALLY ASSUME. THE FANOUT-BOARD-PARITY-ERROR BIT IN THE STORE ERROR REGISTER
44 # COMBINES ERROR INDICATIONS FROM THE ADDRESS PARITY LOW CHECK (SA0-7,PL) AND
45 # THE ADDRESS PARITY HIGH CHECK (SA8-19,PH) CIRCUITS. FIRST, THE PARITY LOW
46 # CHECK CIRCUIT IN EACH EQUIPPED FANOUT BOARD IS EXERCISED WHILE THE PARITY OVER
47 # THE HIGH BITS IS HELD GOOD FOR THE PARTICULAR STORE UNDER TEST. THE ADDRESS
48 # PARITY LOW BIT SPECIFIED SHOULD PRODUCE AN ADDRESS PARITY ERROR FOR EACH
49 # EQUIPPED FANOUT BOARD. THIS IS FOLLOWED BY A SIMILAR TESTING OF THE PARITY

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 41

TEST 46

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB

W77D

D1 # HIGH CHECK CIRCUIT DURING WHICH THE PARITY OVER THE LOW ADDRESS BITS IS HELD
D2 # GOOD. HOWEVER, IN THIS EXERCISE THE PARITY HIGH BIT IS HELD CONSTANT SO THAT
D3 # THE RESULTING PATTERN OF ADDRESS PARITY (HIGH) ERRORS FROM THE FANOUT BOARDS
D4 # MUST BE COMPARED WITH THE RESULTS EXPECTED FOR THE PARTICULAR STORE UNDER
D5 # TEST. IF THERE ARE ANY MISMATCHES BETWEEN THE TWO PATTERNS, THEN A FAULT IN
D6 # THE ADDRESS PARITY HIGH CHECK CIRCUIT IS INDICATED.

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 42

TEST 46

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

01 CSTFB6 OM      0(1),0(16)      # 12705
-001- 02      NOTE      ***** THE FIRST ADDRESS OVERWRITTEN IS 000001 *****

0023273
05 FB6INIT PREPARE
-002- 06 #      RTN.BLM
-002- 07 #      TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0023273 02 000001 000144 ----- CDGNM      -002- 08      VFD      1,0 2,0 6,0 1,1 6,NRTNBLM
-002- 10 #      SEND
-002- 11 #      SEND 0(00000001) TO OFF-LINE MCHB.
-002- 12 #      PARITY IS 0(2).
0023274 02 000002 047707 ----- CDGNM      -002- 13      VFD      1,0 2,2 7,8(01111111) 6,N2SEND
0023275 02 000003 000040 000001      -002- 14      ADDR      0(00000001),0(2)
-002- 16 #      MICRO
-002- 17 #      PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 18 #      TO FIELD = MSXT FROM FIELD = MCHBXF
0023277 02 000005 020005 ----- CDGNM      -002- 19      VFD      1,0 2,1 7,0 6,MICRO
0023300 02 000006 106631 -----      -002- 20      VFD      8,MSXT 8,MCHBXF
-002- 22 #      NO3 CODE
-002- 23 #      PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0023301 02 000007 040043 000000 CDGNM      -002- 24      VFD      1,0 2,2 7,0 6,NN03CD
0023302 02 000010 000000 023304 0023304      -002- 25      ADDR      **2
-001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
-002- 28      LI      R4,MXAS
0023304 02 000012 103501 000151 TTYTBL      -001- 29      STL      R4,PAGSCR+24
0023306 02 000014 034500 043132 CTSD      -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
-001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
-001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0023310 02 000016 103240 -----      -001- 34      ZR      LOOPIND
0023311 02 000017 004257 -----      -001- 35      SN      LOOPIND,1      #ASSURE THAT LOOPIND IS ZERO BEFORE
                                           #PROCEEDING WITH TEST
0023312 02 000020 072652 ----- CDGNM      -001- 37      HN      LOOPIND,LOOPIND
0023313 02 000021 037020 012757 CDGSIO      -002- 38      BSA      CONTPREP
0023315 02 000023 172652 ----- CDGNM      -001- 39      HN      LOOPIND,LOOPIND
0023316 02 000024 137020 012667 CDGSIO      -003- 40      BSA      MASIOW
0023320 02 000026 046071 -----      -002- 41      DATA      MASCINT      # INITIALIZE STORE CONTROLLER
0023321 02 000027 171400 -----      -002- 43      GA
0023322 02 000030 031000 023326      -002- 44      LAL      RD,**4,RAO
0023324 02 000032 037000 011162 CDGNM      -002- 45      BL      INTRPNO3

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 43

TEST 46

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG9FB

W77D

0023326

01
-001- 02EOM
NOTE

12705

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG9FB ISSUE 05 PAGE 44

TEST 46 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W770

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 46 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

0023326 02 000034 000100 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,0(1) 6,NTESTSEG

```

11 # THIS SEGMENT PARTIALLY EXERCISES THE STORE ADDRESS PARITY CHECK CIRCUITS
12 # ON ALL EQUIPPED FANOUT BOARDS. THE TEST PATTERN B(1001000110010001) IS
13 # APPLIED THRU SPECIFIC STORE ADDRESS BITS (SA0-14). STORE-SELECT AND MODULE-
14 # SELECT BITS ARE CHECKED ON EACH FANOUT BOARD ONLY IN THE STATES THEY WOULD
15 # NORMALLY ASSUME. THE FANOUT-BOARD-PARITY-ERROR BIT IN THE STORE ERROR REGISTER
16 # COMBINES ERROR INDICATIONS FROM THE ADDRESS PARITY LOW CHECK (SA0-7,PL) AND
17 # THE ADDRESS PARITY HIGH CHECK (SA8-19,PH) CIRCUITS. FIRST, THE PARITY LOW
18 # CHECK CIRCUIT IN EACH EQUIPPED FANOUT BOARD IS EXERCISED WHILE THE PARITY OVER
19 # THE HIGH BITS IS HELD GOOD FOR THE PARTICULAR STORE UNDER TEST. THE ADDRESS
20 # PARITY LOW BIT SPECIFIED SHOULD PRODUCE NO ADDRESS PARITY ERROR FOR EACH
21 # EQUIPPED FANOUT BOARD. THIS IS FOLLOWED BY A SIMILAR TESTING OF THE PARITY
22 # HIGH CHECK CIRCUIT DURING WHICH THE PARITY OVER THE LOW ADDRESS BITS IS HELD
23 # GOOD. HOWEVER, IN THIS EXERCISE THE PARITY HIGH BIT IS HELD CONSTANT SO THAT
24 # THE RESULTING PATTERN OF ADDRESS PARITY (HIGH) ERRORS FROM THE FANOUT BOARDS
25 # MUST BE COMPARED WITH THE RESULTS EXPECTED FOR THE PARTICULAR STORE UNDER
26 # TEST. IF THERE ARE ANY MISMATCHES BETWEEN THE TWO PATTERNS, THEN A FAULT IN
27 # THE ADDRESS PARITY HIGH CHECK CIRCUIT IS INDICATED.

```

```

-001- 29 # NO3 CODE
-001- 30 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBPARCK4.
0023327 02 000035 040043 000000 CDGNM -001- 31 VFD 1,0 2,2 7,0 6,NNO3CD
0023332 02 000036 000000 023332 0023332 -001- 32 ADDR FBPARCK4

```

34 # TEST PARITY LOW CHECK CKT FIRST - INSURE THAT PARITY HIGH IS ALWAYS OK

0023332

36 FBPARCK4

0023332

37 CALL

F0BNDX

LOAD NUMBER OF EQUIPPED FOB'S INTO
F0BCNT'

0023332 02 000040 137020 013166 CDGSFA

-001- 39

BSA

F0BNDX

0023334 02 000042 103100 -----

-001- 40

ZR

R4

CLEAR ERROR STORAGE REG

0023335 02 000043 030700 043140 CTSD

-001- 41

LL

R12,BASADDR

0023337 02 000045 003761 000151

-001- 42

LI

R15,B(0101001)

0023341

44

STRT12ST FBPARCK4

-001- 43

#

COMPLEMENT THIS PATTERN IF EITHER STORE 1 OR 2 IS CURRENTLY UNDER TEST

0023341 02 000047 030460 012756 CDGS10

-001- 46

LL

R3,STELMSK

0023343 02 000051 006123 -----

-001- 47

LR

R5,R3

SAVE STORE SELECT MASK

0023344 02 000052 014074 -----

-001- 48

NR

R3,R12

IS THIS STORE 0?

0023345 02 000053 054004 ----- 0023351

-001- 49

BC

FBPATLDA

IF SO, EXIT FROM THIS TEST

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 45

TEST 46 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

0023346 02 000054 015123 ----- -001- 01 XR R5,R3 # IS THIS STORE 3?
0023347 02 000055 054002 ----- -001- 02 BC FBPATLDA # IF SO, EXIT FROM THIS TEST
0023350 02 000056 015777 ----- -001- 03 COM R15
-001- 04 # COMPLEMENT IS PROPER ADDRESS PARITY HIGH CHECK RESULT FOR STORES 1 & 2

0023351 06 FBPATLDA
0023351 02 000057 103120 ----- -001- 07 ZR R5 # ZERO LOOP COUNT
0023352 02 000060 003140 ----- -001- 08 LN R6,PRHOLD # INITIALIZE SPECIAL PARITY REG
0023353 02 000061 003721 110621 -001- 09 LI R15,X(9191) # LOAD TEST PATTERN
0023355 02 000063 030400 012753 CDGSIO -001- 10 LL R0,MSELMSK
0023357 02 000065 015400 ----- -001- 11 COM R0 # MASK FOR NON-MOD-SELECT BITS
12 CSTFB6 OW Q(66) # 12989
-001- 13 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000066 *****

0023360 02 000066 037000 115126 0000033 -001- 16 CPATCH3 BGNP Q(33) # 12989
-001- 17 BL XXX442
-001- 18 NOTE CPATCH3 'CSECT'
-001- 19 NOTE ***** PATCH AREA BEGINS AT 000033 *****

0115126 -001- 22 XXX442 PATCHAREA
0115126 10 000033 114320 ----- -001- 23 NR R13,R0
0115127 24 # ADDRESS FIRST MEMORY MOD.
0115127 10 000034 003340 ----- -001- 25 ZR R14
0115130 26 # START WITH ZERO INCREMENT
0115130 10 000035 073025 ----- -001- 27 CALL WAIT # TAKE A REAL TIME BREAK
0115130 10 000035 073025 ----- -001- 28 BSAI WAIT # SUBROUTINE WAIT IS IN PROGRAM CBLM
0115131 29 # 12989
0115131 10 000036 137000 023362 0000070 -001- 30 BL XXX445
-001- 31 NOTE ***** LAST PATCH ADDRESS USED IS 000037 *****
-001- 32 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0023362 -001- 35 XXX445 ONCONTINUE
0023362 36 EOW # 12989
-001- 37 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000067 *****

0023362 40 FBPCLP4
0023362 02 000070 101736 ----- -001- 41 AR R13,R14 # INCREMENT MOD
0023363 02 000071 055002 ----- -001- 42 BNC NOCARY4
0023364 02 000072 004701 ----- -001- 43 AN R12,1 # ADJUST UPPER MOD BITS
0023365 44 NOCARY4
0023365 02 000073 130740 012754 CDGSIO -001- 45 LL R14,MODSIZE # MODULE INCREMENT
0023367 46 S1OW MASCINT
0023367 02 000075 037020 012667 CDGSIO -002- 47 BSA MASCION
0023371 02 000077 046071 ----- -001- 48 DATA MASCINT # INITIALIZE STORE CONTROLLER
0023372 02 000100 122141 ----- -001- 49 ZBN R6,1 # CLEAR SPECIAL PARITY HIGH

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 46

TEST 46 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CD6SFB W77D

```

0023373 02 000101 024765 ----- 01      TBR      R15,R5      # GET PARITY HIGH FOR THIS MOD
0023374 02 000102 055002 ----- 02      BNC      FBSNDAD4    # SKIP AHEAD IF PARITY HIGH = 0
0023375 02 000103 026141 ----- 03      SBN      R6,1      # SET SPECIAL PARITY HIGH
04 # THE PRECEDING ROUTINE GUARANTEES THAT PARITY LOW CHECK CKT FAULTS WILL NOT BE
05 # MASKED BY THE PARITY HIGH CHECK CKT

0023376 07 FBSNDAD4
0023376 08      NMLREAD  RAD,NOSPAR
0023376 02 000104 103561 106260 -001- 09      LI      R7,B(1000110010110000) # MAIN MEMORY STATUS
0023400 02 000106 006054 ----- -001- 10      LR      R2,R12
0023401 02 000107 006075 ----- -001- 11      LR      R3,R13
0023402 02 000110 037020 013027 CD6SBS -002- 12      BSA      MEMOP
0023404 13      SRI0     SERREAD
0023404 02 000112 137020 012667 CD6SIO -002- 14      BSA      MASION
0023406 02 000114 047114 ----- -001- 15      DATA    SERREAD      # READ BACK STORE ERROR REGISTER(SER)
0023407 02 000115 124270 ----- 16      TBN      R11,S(FOBPARER)
0023410 02 000116 055002 ----- 17      BNC      FBPCJP4
0023411 02 000117 026505 ----- 18      SBR      R4,R5      # SET BIT FOR PARITY ERROR
0023412 19 FBPCJP4
0023412 02 000120 104521 ----- 20      AN      R5,1      # INCREMENT LOOP COUNT
0023413 02 000121 020130 ----- 21      CR      R5,FOBCNT  # LAST FANOUT BOARD TO BE TESTED?
0023414 02 000122 055746 ----- 22      BNC      FBPCLP4    # IF NOT, RETURN
0023415 02 000123 007464 ----- 23      LSR      MCHB,R4    # IF SO, PREPARE FOR COMPARE'S
0023416 24      RTN_TBL  **4
0023416 02 000124 071400 ----- -001- 25      6A
0023417 02 000125 031000 023423 0023423 -001- 26      LAL      R0,**4,RAO
0023421 02 000127 037000 011162 CD6NM -001- 27      BL      INTRPNO3

-001- 29 #      TTY_DATA
-001- 30 #      STORE CONTENTS OF ON-LINE MCHB AS A DATA WORD FOR TTY FAILURE MESSAGE.
0023423 02 000131 000016 ----- CD6NM -001- 31      VFD      1,0 2,0 4,0 1,0 1,1-1 1,0 0,NTTY

33 # SET BIT INDICATES FANOUT BOARD WITH FAULTY PARITY CHECK CKT
-001- 34 #      COMPARE
-001- 35 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(00000000).
-001- 36 #      IF COMPARISON EXITS, SKIP NEXT TABLE ENTRY.
0023424 02 000132 050014 ----- CD6NM -001- 37      VFD      1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0023425 02 000133 000000 000000 -001- 38      ADDR     0(00000000)

-001- 40 #      FAILBIT
-001- 41 #      FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS PARFOBXX
-001- 42 #      WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0023427 02 000135 020120 ----- CD6NM -001- 43      VFD      1,0 2,1 5,0 2,1 6,NFLBITS
0023430 02 000136 000002 ----- -001- 44      VFD      16,PARFOB

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CD6SFB ISSUE 05 PAGE 47

TEST 46 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

01 # FAULT IN ADDRESS PARITY LOW CHECK CKT ON A FANOUT BOARD WITH ADDRESS = X(9191)

```

-001- 04 # NO3_CODE
-001- 05 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBPARCK5.
0023431 02 000137 040043 000000 CDGNM -001- 06 VFD 1,0 2,2 7,0 6,NN03CD
0023432 02 000140 000000 023434 0023434 -001- 07 ADDR FBPARCK5

```

11 # TEST PARITY HIGH CHECK CKT NEXT - INSURE THAT PARITY LOW IS ALWAYS OK

```

0023434 13 FBPARCK5
0023434 14 CALL F0BNDX
0023434 02 000142 137020 013166 CDGSFA -001- 15 BSA F0BNDX
0023436 02 000144 103120 -001- 16 ZR R5 # ZERO LOOP COUNT
0023437 02 000145 003100 -001- 17 ZR R4 # CLEAR ERROR STORAGE REG
0023440 02 000146 030700 043140 CTSD 18 LL R12,BASADDR
0023442 02 000150 003721 110621 19 LI R13,X(9191) # LOAD TEST PATTERN
0023444 02 000152 030400 012753 CDGS10 20 LL RD,M0SELMASK
0023446 02 000154 015400 -001- 21 COM RD # MASK FOR NON-MOD-SELECT BITS
22 CSTFB6 OW 0(155) # 12989
-001- 23 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000155 *****

```

```

0023447 02 000155 037000 115133 0000040 -001- 26 CPATCH3 BGNP 0(40) # 12989
-001- 27 BL XXX464
-001- 28 NOTE CPATCH3 'CSECT'
-001- 29 NOTE ***** PATCH AREA BEGINS AT 000040 *****

```

```

0115133 -001- 32 XXX464 PATCHAREA
0115133 33 NR R13,RD
0115134 34 # ADDRESS FIRST MEMORY MOD.
0115134 10 000041 003340 -001- 35 ZR R14
0115135 36 # START WITH ZERO INCREMENT
0115135 37 # TAKE A REAL TIME BREAK
0115135 10 000042 073025 -001- 38 CALL WAIT
0115136 39 BSAI WAIT # SUBROUTINE WAIT IS IN PROGRAM CBLM
0115136 40 ENDP # 12989
0115136 10 000043 137000 023451 0000157 -001- 40 BL XXX467
-001- 41 NOTE ***** LAST PATCH ADDRESS USED IS 000044 *****
-001- 42 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

```

```

0023451 -001- 45 XXX467 OMCONTINUE # 12989
0023451 46 EOW
-001- 47 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000156 *****

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 48

TEST 46 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG6FB W77D

```

0023451
0023451 02 000157 101736 ----- 01 FBPCLP5
0023452 02 000160 055002 ----- 02 AR R13,R14 # INCREMENT MOD
0023453 02 000161 004701 ----- 03 BNC NOCARY5
0023454 02 000161 004701 ----- 04 AN R12,1 # ADJUST UPPER MOD BITS
0023454 02 000162 130740 C12754 CD6S10 05 NOCARY5
0023456 02 000162 130740 C12754 CD6S10 06 LL R14,MODSIZE # MEMORY MODULE INCREMENT
0023456 02 000164 037020 012667 CD6S10 07 S10M MASCINT
0023460 02 000166 046071 ----- -002- 08 BSA MASCINT
0023461 02 000171 103561 106260 -001- 09 DATA MASCINT # INITIALIZE STORE CONTROLLER
0023461 02 000171 103561 106260 10 NMLREAD RAO,PRHOLD
0023463 02 000171 006054 ----- -001- 11 LI R7,B(100011001010000) # MAIN MEMORY STATUS
0023464 02 000172 006075 ----- -001- 12 LR R2,R12
0023465 02 000173 003541 000020 -001- 13 LR R3,R13
0023467 02 000175 037020 013027 CD6SBS -001- 14 LI R6,PRHOLD # SETUP SPECIAL PARITY
0023471 02 000175 037020 013027 CD6SBS -002- 15 BSA HEMOP
0023471 02 000177 137020 012667 CD6S10 16 SRIO SERREAD
0023473 02 000201 047114 ----- -002- 17 BSA MASCINT
0023474 02 000202 124270 ----- -001- 18 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0023475 02 000203 055002 ----- 19 TBN R11,S(F0BPAPER)
0023476 02 000204 026505 ----- 20 BNC FBPCJP5
0023477 02 000205 104521 ----- 21 SBR R4,R5 # SET BIT FOR PARITY ERROR
0023477 02 000205 104521 ----- 22 FBPCJP5
0023500 02 000206 020130 ----- 23 AN R5,1 # INCREMENT LOOP COUNT
0023501 02 000207 055750 ----- 24 CR R5,F0BCNT # LAST FANOUT BOARD TO BE TESTED?
0023501 02 000207 055750 ----- 25 BNC FBPCLP5 # IF NOT, RETURN

28 # COMPARE WITH APPROPRIATE RESULTS FOR STORES 0 & 3 OR STORES 1 & 2
0023502 02 000210 003761 000151 30 LI R15,B(01101001)
0023504 02 000210 003761 000151 31 # THIS REPRESENTS PROPER ADDRESS PARITY HIGH CHECK RESULTS FOR STORES 0 & 3
0023504 02 000210 003761 000151 32 STR12ST FBPAST5
0023504 02 000212 030460 012756 CD6S10 -001- 33 # COMPLEMENT THIS PATTERN IF EITHER STORE 1 OR 2 IS CURRENTLY UNDER TEST
0023506 02 000214 006123 ----- -001- 34 LL R3,STSELMSK
0023507 02 000215 014074 ----- -001- 35 LR R5,R3 # SAVE STORE SELECT MASK
0023510 02 000216 054004 ----- -001- 36 NR R3,R12 # IS THIS STORE 0?
0023511 02 000217 015123 ----- -001- 37 BC FBPAST5 # IF SO, EXIT FROM THIS TEST
0023512 02 000217 015123 ----- -001- 38 XR R5,R3 # IS THIS STORE 3?
0023512 02 000220 054002 ----- -001- 39 BC FBPAST5 # IF SO, EXIT FROM THIS TEST
0023513 02 000221 015777 ----- -001- 40 COM R15
0023514 02 000222 103060 ----- -001- 41 # COMPLEMENT IS PROPER ADDRESS PARITY HIGH CHECK RESULT FOR STORES 1 & 2
0023514 02 000222 103060 ----- 43 FBPAST5
0023515 02 000223 004217 ----- 44 ZR R3
0023515 02 000223 004217 ----- 45 SN F0BCNT,1 # SET UP LOOP INDEX

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG6FB ISSUE 05 PAGE 49

TEST 46 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

0023516
0023516 02 000224 126470 ----- 01 FBMSK5
0023517 02 000225 036200 023516 0023516 02 SBR R3,FOBENT # SET BIT FOR EACH FANOUT BOARD
0023517 02 000225 036200 023516 02 BX FOBENT,FBMSK5 # MASK FOR EQUIPPED FANOUT BOARDS

0023521 02 000227 014363 ----- 05 NR R15,R3 # CLEAR BITS FOR UNEQUIPPED FANOUT BOARDS
0023522 02 000230 015117 ----- 06 XR R4,R15 # COMPARE RESULTS TO EXPECTED PATTERN
0023523 02 000231 007464 ----- 07 LSR MCHB,R4 # PREPARE FOR COMPARE
0023524
0023524 02 000232 071400 ----- 08 RTN_TBL ***
0023525 02 000233 031000 023531 -001- 09 GA
0023527 02 000235 037000 011162 CDGNH -001- 10 LAL RD,***,RAD
-001- 11 BL INTRPNO3

-001- 13 # TTY_DATA
0023531 02 000237 000016 ----- CDGNH -001- 14 # STORE CONTENTS OF ON-LINE MCHB AS A DATA WORD FOR TTY FAILURE MESSAGE.
-001- 15 VFD 1,0 2,0 4,0 1,0 1,1-1 1,0 6,NTTY

17 # SET BIT INDICATES FANOUT BOARD WITH FAULTY PARITY HIGH CHECK CKT

-001- 19 # COMPARE
-001- 20 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 21 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0023532 02 000240 050014 ----- CDGNH -001- 22 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0023533 02 000241 000000 000000 -001- 23 ADDR 0(0000000)

-001- 25 # FAILBIT
-001- 26 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS PARFOBXX
-001- 27 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0023535 02 000243 020120 ----- CDGNH -001- 28 VFD 1,0 2,1 5,0 2,1 6,NFLBITS
0023536 02 000244 000002 ----- -001- 29 VFD 16,PARFOB

31 # FAULT IN ADDRESS PARITY HIGH CHECK CKT ON A FANOUT BOARD WITH ADDRESS=X(9191)

```

STORE FANOUT BOARDS TEST-PART B

PR-1C924-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 50

TEST 46 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 46 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

0023537 02 000245 000200 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTESTSEG

```

11 # THIS SEGMENT PARTIALLY EXERCISES THE STORE ADDRESS PARITY CHECK CIRCUITS
12 # ON ALL EQUIPPED FANOUT BOARDS. THE TEST PATTERN B(0010101000101010) IS
13 # APPLIED THRU SPECIFIC STORE ADDRESS BITS (SA0-14). STORE-SELECT AND MODULE-
14 # SELECT BITS ARE CHECKED ON EACH FANOUT BOARD ONLY IN THE STATES THEY WOULD
15 # NORMALLY ASSUME. THE FANOUT-BOARD-PARITY-ERROR BIT IN THE STORE ERROR REGISTER
16 # COMBINES ERROR INDICATIONS FROM THE ADDRESS PARITY LOW CHECK (SA0-7,PL) AND
17 # THE ADDRESS PARITY HIGH CHECK (SA8-19,PH) CIRCUITS. FIRST, THE PARITY LOW
18 # CHECK CIRCUIT IN EACH EQUIPPED FANOUT BOARD IS EXERCISED WHILE THE PARITY OVER
19 # THE HIGH BITS IS HELD GOOD FOR THE PARTICULAR STORE UNDER TEST. THE ADDRESS
20 # PARITY LOW BIT SPECIFIED SHOULD PRODUCE AN ADDRESS PARITY ERROR FOR EACH
21 # EQUIPPED FANOUT BOARD. THIS IS FOLLOWED BY A SIMILAR TESTING OF THE PARITY
22 # HIGH CHECK CIRCUIT DURING WHICH THE PARITY OVER THE LOW ADDRESS BITS IS HELD
23 # GOOD. HOWEVER, IN THIS EXERCISE THE PARITY HIGH BIT IS HELD CONSTANT SO THAT
24 # THE RESULTING PATTERN OF ADDRESS PARITY (HIGH) ERRORS FROM THE FANOUT BOARDS
25 # MUST BE COMPARED WITH THE RESULTS EXPECTED FOR THE PARTICULAR STORE UNDER
26 # TEST. IF THERE ARE ANY MISMATCHES BETWEEN THE TWO PATTERNS, THEN A FAULT IN
27 # THE ADDRESS PARITY HIGH CHECK CIRCUIT IS INDICATED.

```

```

-001- 29 # NO3_CODE
-001- 30 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBPARCK6.
0023540 02 000246 040043 000000 CDGNM -001- 31 VFD 1,0 2,2 7,0 6,NNO3CD
0023541 02 000247 000000 023543 0023543 -001- 32 ADDR FBPARCK6

34 # TEST PARITY LOW CHECK CKT FIRST - INSURE THAT PARITY HIGH IS ALWAYS OK

0023543 36 FBPARCK6
0023543 37 CALL F0BNDX # LOAD NUMBER OF EQUIPPED F0B'S INTO 'F0BCNT'

0023543 02 000251 137020 013166 CDGSFA -001- 39 BSA F0BNDX
0023545 02 000253 103100 ----- 40 ZR R4 # CLEAR ERROR STORAGE REG
0023546 02 000254 030700 043140 CTSD 41 LL R12,BASADDR
0023550 02 000256 003761 000151 42 LL R15,B(01101001)
43 # THIS REPRESENTS PROPER ADDRESS PARITY HIGH FOR STORES 0 & 3 - MODS 0-7
0023552 44 STR12ST FBPATL6
-001- 45 # COMPLEMENT THIS PATTERN IF EITHER STORE 1 OR 2 IS CURRENTLY UNDER TEST
0023552 02 000260 030460 012756 CDGS10 -001- 46 LL R3,STSELMSK
0023554 02 000262 004123 ----- -001- 47 LR R5,R3 # SAVE STORE SELECT MASK
0023555 02 000263 014074 ----- -001- 48 NR R3,R12 # IS THIS STORE 0?
0023556 02 000264 054004 ----- 0023562 -001- 49 BC FBPATL6 # IF SO, EXIT FROM THIS TEST

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 51

TEST 46 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

0023557 02 000245 015123 ----- -001- 01 XR R5,R3 # IS THIS STORE 3?
0023560 02 000246 054002 ----- 0023562 -001- 02 BC FBPATLDB # IF 50, EXIT FROM THIS TEST
0023561 02 000267 015777 ----- -001- 03 COM R15
-001- 04 # COMPLEMENT IS PROPER ADDRESS PARITY HIGH CHECK RESULT FOR STORES 1 & 2

0023562 06 FBPATLDB
0023562 02 000270 103120 ----- 07 01 ZR R5 # ZERO LOOP COUNT
0023563 02 000271 003541 000005 08 01 LI R6,PRHOL1 # INITIALIZE SPECIAL PARITY REG
0023565 02 000273 003721 025052 09 01 LI R13,X(2A2A) # LOAD TEST PATTERN
0023567 02 000275 030400 012753 CDGSIO 10 01 LL RD,MOSELMSK
0023571 02 000277 015400 ----- 11 01 COM RD # MASK FOR NON-MOD-SELECT BITS
12 CSTFB6 0W 0(300) # 12989
-001- 13 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000300 *****

0023572 02 000300 037000 115140 0000045 -001- 16 CPATCH3 BGNP 0(45) # 12989
-001- 17 BL XXX489
-001- 18 NOTE CPATCH3 'CSECT'
-001- 19 NOTE ***** PATCH AREA BEGINS AT 000045 *****

0115140 -001- 22 XXX489 PATCHAREA
0115140 23
0115140 10 000045 114320 ----- 24 NR R13,R0 # ADDRESS FIRST MEMORY MOD.
0115141 25
0115141 10 000046 003340 ----- 26 ZR R14 # START WITH ZERO INCREMENT
0115142 27
0115142 10 000047 073025 ----- -001- 28 CALL WAIT # TAKE A REAL TIME BREAK
0115143 29 ENDP # SUBROUTINE WAIT IS IN PROGRAM CBLM
0115143 10 000050 137000 023574 0000302 -001- 30 BL XXX492 # 12989
-001- 31 NOTE ***** LAST PATCH ADDRESS USED IS 000051 *****
-001- 32 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0023574 -001- 35 XXX492 ONCONTINUE
0023574 36 EOW # 12989
-001- 37 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000301 *****

0023574 40 FBPCLP6
0023574 02 000302 101736 ----- 41 01 AR R13,R14 # INCREMENT MOD
0023575 02 000303 055002 ----- 0023577 42 BNC NOCARY6
0023576 02 000304 004701 ----- 43 AN R12,1 # ADJUST UPPER MOD BITS
0023577 44 NOCARY6
0023577 02 000305 130740 012754 CDGSIO 45 LL R14,MODSIZE # MODULE INCREMENT
0023601 46 SIOW MASCINT
0023601 02 000307 037020 012667 CDGSIO -002- 47 BSA MASIOW
0023603 02 000311 046071 ----- -001- 48 DATA MASCINT # INITIALIZE STORE CONTROLLER
0023604 02 000312 122141 ----- 49 ZBN R6,1 # CLEAR SPECIAL PARITY HIGH

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 52

TEST 46 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

0023605 02 000313 024765 ----- 01 TBR R15,R5 # GET PARITY HIGH FOR THIS MOD
0023606 02 000314 055002 ----- 02 BNC FBSNDAD6 # SKIP AHEAD IF PARITY HIGH = 0
0023607 02 000315 026141 ----- 03 SBN R6,1 # SET SPECIAL PARITY HIGH
04 # THE PRECEDING ROUTINE GUARANTEES THAT PARITY LOW CHECK CKT FAULTS WILL NOT BE
05 # MASKED BY THE PARITY HIGH CHECK CKT

0023610 07 FBSNDAD6
0023610 08 NMLREAD RA0,NOSPAR
0023610 02 000316 103561 106260 -001- 09 LI R7,B(1000110010110000) # MAIN MEMORY STATUS
0023612 02 000320 006054 ----- -001- 10 LR R2,R12
0023613 02 000321 006075 ----- -001- 11 LR R3,R13
0023614 02 000322 037020 013027 CDGSBS -002- 12 BSA MEMOP
0023616 13 SRIO SERREAD
0023616 02 000324 137020 012667 CDGSIO -002- 14 BSA MASION
0023620 02 000326 047114 ----- -001- 15 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0023621 02 000327 124270 ----- 16 TBN R11,S(F0BPARER)
0023622 02 000330 055002 ----- 17 BNC FBPCJP6
0023623 02 000331 026505 ----- 18 SBR R4,R5 # SET BIT FOR PARITY ERROR
0023624 19 FBPCJP6
0023624 02 000332 104521 ----- 20 AN R5,1 # INCREMENT LOOP COUNT
0023625 02 000333 020130 ----- 21 CR R5,F0BCNT # LAST FANOUT BOARD TO BE TESTED?
0023626 02 000334 055746 ----- 22 BNC FBPCLP6 # IF NOT, RETURN
0023627 02 000335 004217 ----- 23 SN F0BCNT,1 # SET UP LOOP INDEX
0023630 02 000336 003060 ----- 24 ZR R3
0023631 25 FBMSK6
0023631 02 000337 126470 ----- 26 SBR R3,F0BCNT # SET BIT FOR EACH EQUIPPED FANOUT BOARD
0023632 02 000340 036200 023631 0023631 27 BX F0BCNT,FBMSK6
0023634 02 000342 015463 ----- 28 COM R3
0023635 02 000343 014503 ----- 29 OR R4,R3 # SET ALL UNUSED BITS IN ERROR WORD
0023636 02 000344 007464 ----- 30 LSR MCHB,R4 # IF SO, PREPARE FOR COMPARE'S
0023637 31 RTN_TBL +4
0023637 32 GA
0023640 02 000346 031000 023644 0023644 -001- 33 LAL R0,++A,RA0
0023642 02 000350 037000 011162 CDGNM -001- 34 BL INTRPNO3
-001- 36 # TTY_DATA
-001- 37 # STORE CONTENTS OF ON-LINE MCHB AS A DATA WORD FOR TTY 'AILEURE MESSAGE.
0023644 02 000352 000016 ----- CDGNM -001- 38 VFD 1,0 2,0 4,0 1,0 1,1-1 1,0 6,NTTY
40 # SET BITS INDICATE PARITY ERRORS FROM EQUIPPED FANOUT BOARDS - ALL-ONES IS GOOD
-001- 41 # COMPARE
-001- 42 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 43 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0023645 02 000353 050014 ----- CDGNM -001- 44 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCMPARE
0023646 02 000354 000000 177777 -001- 45 ADDR 0(0177777)

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 53

TEST 46 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W770

```

-001- 01 # FAILBIT
-001- 02 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS PARFOBXX
-001- 03 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0023650 02 000356 020120 ----- CDGMN
0023651 02 000357 000002 -----
-001- 04 VFD 1,0 2,1 5,0 2,1 6,NFLBITS
-001- 05 VFD 16,PARFOB

```

07 # FAULT IN ADDRESS PARITY LOW CHECK CKT ON A FANOUT BOARD WITH ADDRESS = X(2A2A)

```

-001- 10 # NO3 CODE
-001- 11 # PROCESS JACC CODED ROUTINE AT ADDRESS FBPARCK7.
0023652 02 000360 040043 000000 CDGMN
0023653 02 000361 000000 023655 0023655
-001- 12 VFD 1,0 2,2 7,0 6,NNO3CD
-001- 13 ADDR FBPARCK7

```

17 # TEST PARITY HIGH CHECK CKT NEXT - INSURE THAT PARITY LOW IS ALWAYS OK

```

0023655
0023655
0023655 02 000363 137020 013166 CDGSFA
0023657 02 000365 103120 -----
0023660 02 000366 003100 -----
0023661 02 000367 030700 043140 CTSO
0023663 02 000371 003721 025052
0023665 02 000373 030400 012753 CDGSIO
0023667 02 000375 015400 -----
-001- 19 FBPARCK7
20 CALL F0BNDX
21 BSA F0BNDX
22 ZR R5 # ZERO LOOP COUNT
23 ZR R4 # CLEAR ERROR STORAGE REG
24 LL R12,BASADDR
25 LI R13,X(2A2A) # LOAD TEST PATTERN
26 LL R0,M0SELMSK
27 COM R0 # MASK FOR NON-MOD-SELECT BITS
28 CSTFB6 OV 0(376) # 12989
-001- 29 NOTE ***** THE FIRST ADDRESS OVERRITTEN IS 000376 *****

```

```

0023670 02 000376 037000 115145 0000052
-001- 32 CPATCH3 BGMP 0(52) # 12989
-001- 33 BL XXX511
-001- 34 NOTE CPATCH3 'CSECT'
-001- 35 NOTE ***** PATCH AREA BEGINS AT 000052 *****

```

```

0115145
0115145
0115145 10 000052 114320 -----
0115146
0115146 10 000053 003340 -----
0115147
0115147 10 000054 073025 -----
0115150
0115150 10 000055 137000 023672 0000400
-001- 36 XXX511 PATCHAREA
39
40 NR R13,R0 # ADDRESS FIRST MEMORY MOD.
41 # START WITH ZERO INCREMENT
42 ZR R14
43 CALL WAIT # TAKE A REAL TIME BREAK
-001- 44 BSAI WAIT # SUBROUTINE WAIT IS IN PROGRAM CBLM
45 ENOP # 12989
-001- 46 BL XXX514
-001- 47 NOTE ***** LAST PATCH ADDRESS USED IS 000056 *****
-001- 48 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 54

TEST 46 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W770

```

0023672 -001- 01 XXX514 OWCONTINUE
0023672 02 EOW # 12989
-001- 03 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000377 *****

0023672 06 FBPCLP7
0023672 02 000400 101736 ----- 07 AR R13,R14 # INCREMENT MOD
0023673 02 000401 055002 ----- 08 BNC NOCARY7
0023674 02 000402 004701 ----- 09 AN R12,1 # INCREMENT UPPER BITS
0023675 10 NOCARY7
0023675 02 000403 130740 012754 CDGSIO 11 LL R14,MODSIZE # MODULE INCREMENT
0023677 12 SIOM MASIOM
0023677 02 000405 037020 012667 CDGSIO -002- 13 BSA MASIOM
0023701 02 000407 046071 ----- -001- 14 DATA MASIOM # INITIALIZE STORE CONTROLLER
0023702 15 HMLREAD RAO,PRHILO
0023702 02 000410 103561 106260 -001- 16 LI R7,B(1000110010110000) # MAIN MEMORY STATUS
0023704 02 000412 006054 ----- -001- 17 LR R2,R12
0023705 02 000413 066075 ----- -001- 18 LR R3,R13
0023706 02 000414 003541 000012 -001- 19 LI R6,PRHILO # SETUP SPECIAL PARITY
0023710 02 000416 037020 013027 CDGSBS -002- 20 BSA MEMOP
0023712 21 SRIO SERREAD
0023712 02 000420 137020 012667 CDGSIO -002- 22 BSA MASIOM
0023714 02 000422 047114 ----- -001- 23 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0023715 02 000423 124270 ----- 24 TBN R11,5(FBPARER)
0023716 02 000424 055002 ----- 25 BNC FBPCJP7
0023717 02 000425 026505 ----- 26 SBR R4,R5 # SET BIT FOR PARITY ERROR
0023720 27 FBPCJP7
0023720 02 000426 104521 ----- 28 AN R5,1 # INCREMENT LOOP COUNT
0023721 02 000427 020130 ----- 29 CR R5,FOBCNT # LAST FANOUT BOARD TO BE TESTED?
0023722 02 000430 055750 ----- 30 BNC FBPCLP7 # IF NOT, RETURN

33 # COMPARE WITH APPROPRIATE RESULTS FOR STORES 0 & 3 OR STORES 1 & 2
0023723 02 000431 003761 000151 35 LI R15,B(01101001)
0023725 36 # THIS REPRESENTS PROPER ADDRESS PARITY HIGH CHECK RESULTS FOR STORES 0 & 3
37 STR12TST FBPATST7
0023725 02 000433 030460 012756 CDGSIO -001- 38 # COMPLEMENT THIS PATTERN IF EITHER STORE 1 OR 2 IS CURRENTLY UNDER TEST
0023727 02 000435 006123 ----- -001- 39 LL R3,STGELMSK
0023730 02 000436 014074 ----- -001- 40 LR R5,R3 # SAVE STORE SELECT MASK
0023731 02 000437 054004 ----- -001- 41 NR R3,R12 # IS THIS STORE 0?
0023732 02 000440 015123 ----- -001- 42 BC FBPATST7 # IF SO, EXIT FROM THIS TEST
0023733 02 000441 054002 ----- -001- 43 XR R5,R3 # IS THIS STORE 3?
0023734 02 000442 015777 ----- -001- 44 BC FBPATST7 # IF SO, EXIT FROM THIS TEST
-001- 45 COM R15
-001- 46 # COMPLEMENT IS PROPER ADDRESS PARITY HIGH CHECK RESULT FOR STORES 1 & 2

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 55

TEST 46 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB

W770

```

0023735
0023735 02 000443 103060 -----
0023736 02 000444 004217 -----

0023737
0023737 02 000445 126470 -----
0023740 02 000446 036200 023737 0023737

0023742 02 000450 014363 -----
0023743 02 000451 015117 -----
0023744 02 000452 007464 -----
0023745
0023745 02 000453 071400 -----
0023746 02 000454 031000 023752 0023752
0023750 02 000456 037000 011162 CDG5H

-001- 12 RTN_TBL **4
-001- 13 GA
-001- 14 LAL RO,**4,RAO
-001- 15 BL INTRPN03

-001- 17 # TTY_DATA
-001- 18 # STORE CONTENTS OF ON-LINE MCHB AS A DATA WORD FOR TTY FAILURE MESSAGE.
-001- 19 VFD 1,0 2,0 4,0 1,0 1,1-1 1,0 6,NTTY

21 # SET BIT INDICATES FANOUT BOARD WITH FAULTY PARITY HIGH CHECK CKT

-001- 23 # COMPARE
-001- 24 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 25 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
-001- 26 VFD 1,LPTNDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 27 ADDR 0(0000000)

-001- 29 # FAILBIT
-001- 30 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS PARFOBX
-001- 31 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
-001- 32 VFD 1,0 2,1 5,0 2,1 6,NFLBITS
-001- 33 VFD 16,PARFOB

35 # FAULT IN ADDRESS PARITY HIGH CHECK CKT ON A FANOUT BOARD WITH ADDRESS=X(2A2A)

-001- 38 # N03_CODE
-001- 39 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
-001- 40 VFD 1,0 2,2 7,0 6,NW03CD
0023760 02 000466 040043 000000 CDG5H
0023761 02 000467 000000 023763 0023763 -001- 41 ADDR **2

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDG5FB

ISSUE 05

PAGE 56

TEST 46 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

	01	CSTFB6	OW	0(471),0(473)	# 12705	
-001-	02	NOTE		***** THE FIRST ADDRESS	OVERWRITTEN IS 000471	*****
0023763			05	FINALE	FB6INIT	
0023763	02	000471	137020	012771	CDGSIO	-002- 06
0023765	02	000473	137000	023315	0023315	-001- 07
0023767	02	000475	171400	-----		-001- 08
0023770	02	000476	037000	011725	CDGNM	-001- 09
0023770						10
	-001-	11	NOTE	***** THE LAST ADDRESS	OVERWRITTEN IS 000477	*****

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 57

TEST 47

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 47, MAIN_STORE_FANOUT_BOARD **
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

```

0023772

-001- 10 CSTFB7 CSECT

0023772 03 000000 000145 ----- CDGNM

-001- 14 VFO 1,0 2,0 2,0 2,0 3,1 6,NBGN

18 # SEGMENT 1
 19 # THIS SEGMENT EXERCISES THE STORE CONTROLLER TIMING GENERATION CIRCUITRY AS
 20 # WELL AS ITS ASSOCIATED CHECK CIRCUITS INCLUDING THE TRANSMISSION OF MEMORY
 21 # TIMING SIGNALS TO AND FROM EACH EQUIPPED FANOUT BOARD. IN ORDER THAT A MAXIMUM
 22 # AMOUNT OF CIRCUITRY GETS EXERCISED BY THIS TEST, A REFRESH OPERATION IS FORCED
 23 # WITH EACH ONE OF THE SIX POSSIBLE STORE COMMANDS PENDING. AFTER THE REFRESH
 24 # AND NORMAL REQUESTS HAVE BEEN HONORED, THE SAME NORMAL STORE OPERATION IS
 25 # REPEATED. THE STORE ERROR REGISTER IS CHECKED BOTH FOR ERRORS FROM THE
 26 # SELECTED FANOUT BOARDS AND THE UNSELECTED FANOUT BOARDS. THIS SEQUENCE IS
 27 # EXECUTED FOR EACH OF THE EQUIPPED FANOUT BOARDS, AND THE ERRORS (SELECT &
 28 # UNSELECT) ARE RECORDED ON THIS BASIS TO FACILITATE THE RESOLUTION OF FAULTS
 29 # TO A SPECIFIC FANOUT BOARD WHEREVER POSSIBLE.

31 # SEGMENT 2
 32 # THIS SEGMENT VERIFIES THE OPERATION OF TWO ENABLES ON THE TIMING SIGNAL
 33 # CHECK CIRCUITRY THAT WERE NOT CHECKED PREVIOUSLY. SPECIFICALLY, THE ENABLE ON
 34 # THE GATED INPUT OF THE READ/WRITE DETECT FF (RW) WHICH COMES FROM BIT 4 OF THE
 35 # TIMING SHIFT REGISTER IS CHECKED BY STEPPING THRU A NORMAL WRITE CYCLE IN THE
 36 # STORE UNDER TEST UP UNTIL THE ACTIVATION OF BIT 3 IN THE TIMING SHIFT
 37 # REGISTER. THIS WILL SET THE CHIP SELECT FF (CS) AND, IN TURN, CAUSE THE
 38 # DETECT-CHIP-SELECT FF (DETCS) TO BE SET. IF THE ERROR STROBE (ERSTB) FROM
 39 # BIT 4 IS STUCK ACTIVE, THEN THE READ/WRITE DETECT FF (RW) WILL ALSO BE SET
 40 # AND THE FANOUT BOARD TIMING ERROR 'A' WILL NOT BE ACTIVE AT THIS POINT.
 41 # OTHERWISE, IF THE ERROR STROBE IS NOT STUCK, THEN AN ERROR WILL BE INDICATED
 42 # DUE TO THE ABSENCE OF THE READ/WRITE DETECT AT THIS POINT. THE ENABLE ON
 43 # THE GATED OUTPUT OF THE READ/WRITE DETECT FF (RW) WHICH COMES FROM THE DETECT-
 44 # CHIP-SELECT FF (DETCS) IS CHECKED BY ACTIVATING THE ERROR STROBE (ERSTB) VIA
 45 # BIT 4 DURING A NORMAL WRITE WHICH SHOULD SET THE READ/WRITE DETECT FF. THIS
 46 # IS FOLLOWED BY THE ACTIVATION OF SHIFTER BIT 0 WHICH SHOULD RECLEAR THE
 47 # DETECT-CHIP-SELECT FF (DETCS). IF THE ENABLE ON THE OUTPUT OF THE RW FF IS
 48 # STUCK ACTIVE, NO FANOUT BOARD TIMING ERROR WILL OCCUR; OTHERWISE DISABLING
 49 # THE OUTPUT OF THE READ/WRITE DETECT FF AT THIS POINT SHOULD CAUSE A FANOUT

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 58

TEST 47

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

H77D

01 # BOARD TIMING ERROR 'A'.

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 59

TEST 47

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB

W77D

```

                                01 CSTFB7 OW      0(1),0(16)      # 12705
                                -001- 02      NOTE      ***** THE FIRST ADDRESS OVERRITTEN IS 000001 *****

0023773
                                05 FB7INIT PREPARE
                                -002- 06 #      RTN_BLM
                                -002- 07 #      TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
0023773 03 000001 000144 ----- CDGNM
                                -002- 08      VFD      1,0 2,0 6,0 1,1 6,NRTNBLM

                                -002- 10 #      SEND
                                -002- 11 #      SEND 0(0000001) TO OFF-LINE MCHB.
                                -002- 12 #      PARITY IS 0(2).
0023774 03 000002 047707 ----- CDGNM
0023775 03 000003 000040 000001
                                -002- 13      VFD      1,0 2,2 7,B(0111111) 6,N2SEND
                                -002- 14      ADDR      0(0000001),0(2)

                                -002- 16 #      MICRO
                                -002- 17 #      PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
                                -002- 18 #      TO FIELD = MSXT FROM FIELD = MCHBXF
0023777 03 000005 020005 ----- CDGNM
0024000 03 000006 106631 -----
                                -002- 19      VFD      1,0 2,1 7,0 6,NMICRO
                                -002- 20      VFD      8,MSXT 8,MCHBXF

                                -002- 22 #      NO3 CODE
                                -002- 23 #      PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0024001 03 000007 040043 000000 CDGNM
0024002 03 000010 000000 024004 0024004
                                -002- 24      VFD      1,0 2,2 7,0 6,NNO3CD
                                -002- 25      ADDR      **2

                                -001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
                                -002- 28      LI      R4,MXAS
                                -001- 29      STL      R4,PAGSCR+24
0024004 03 000012 103501 000151 TTYTBL
0024006 03 000014 034500 043132 CTSB
                                -001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
                                -001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
                                -001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(LOADR) IN PAGING BUFFER(PAGSCR)

0024010 03 000016 103240 -----
0024011 03 000017 004257 -----
                                -001- 34      ZR      LOOPIND
                                -001- 35      SN      LOOPIND,1      #ASSURE THAT LOOPIND IS ZERO BEFORE
                                                                #PROCEEDING WITH TEST

0024012 03 000020 072652 ----- CDGNM
0024013 03 000021 037020 012757 CDG5IO
0024015 03 000023 127652 ----- CDGNM
0024016 03 000024 137020 012667 CDG5IO
0024020 03 000026 046071 -----
                                -001- 37      HN      LOOPIND,LOOPIND
                                -002- 38      BSA      CONTRPREP
                                -001- 39      HN      LOOPIND,LOOPIND
                                -003- 40      BSA      MASION
                                -002- 41      DATA      MASCINT      # INITIALIZE STORE CONTROLLER

0024021 03 000027 171400 -----
0024022 03 000030 031000 024026 0024026
0024024 03 000032 037000 011162 CDGNM
                                -002- 43      GA
                                -002- 44      LAL      RD,**4,RAO
                                -002- 45      BL      INTRPNO3

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 60

A01

TEST 47

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

0024026

01
-001- 02

EDW
NOTE

12705

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 61

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 47 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

```

0024026 03 000034 000100 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,0(1) 6,NTTESTSEG

```

```

11 # THIS SEGMENT EXERCISES THE STORE CONTROLLER TIMING GENERATION CIRCUITRY AS
12 # WELL AS ITS ASSOCIATED CHECK CIRCUITS INCLUDING THE TRANSMISSION OF MEMORY
13 # TIMING SIGNALS TO AND FROM EACH EQUIPPED FANOUT BOARD. IN ORDER THAT A MAXIMUM
14 # AMOUNT OF CIRCUITRY GETS EXERCISED BY THIS TEST, A REFRESH OPERATION IS FORCED
15 # WITH EACH ONE OF THE SIX POSSIBLE STORE COMMANDS PENDING. AFTER THE REFRESH
16 # AND NORMAL REQUESTS HAVE BEEN HONORED, THE SAME NORMAL STORE OPERATION IS
17 # REPEATED. THE STORE ERROR REGISTER IS CHECKED BOTH FOR ERRORS FROM THE
18 # SELECTED FANOUT BOARDS AND THE UNSELECTED FANOUT BOARDS. THIS SEQUENCE IS
19 # EXECUTED FOR EACH OF THE EQUIPPED FANOUT BOARDS, AND THE ERRORS (SELECT &
20 # UNSELECT) ARE RECORDED ON THIS BASIS TO FACILITATE THE RESOLUTION OF FAULTS
21 # TO A SPECIFIC FANOUT BOARD WHEREVER POSSIBLE.

```

```

-001- 23 # NO3 CODE
-001- 24 # PROCESS JACC CODED ROUTINE AT ADDRESS FOBTMCKO.
0024027 03 000035 040043 000000 CDGNM -001- 25 VFD 1,0 2,2 7,0 6,NN03CD
0024030 03 000036 000000 024040 0024040 -001- 26 ADDR FOBTMCKO

```

29 # TABLE OF MAIN MEMORY STATUS REGISTER CONSTANTS FOR THE FOLLOWING TEST:

```

0024032 31 STCOMTBL
0024032 03 000040 106260 ----- 32 DATA NMLRD # MMSR = NORMAL READ
0024033 03 000041 106274 ----- 33 DATA SPRRD # MMSR = SPARE READ
0024034 03 000042 106263 ----- 34 DATA MTCRD # MMSR = MAINTENANCE READ
0024035 03 000043 106200 ----- 35 DATA NMLWR # MMSR = NORMAL WRITE
0024036 03 000044 106214 ----- 36 DATA SPRWR # MMSR = SPARE WRITE
0024037 03 000045 106203 137020 37 DATA MTCWR # MMSR = MAINTENANCE WRITE

```

```

0024040 40 FOBTMCKO
0024040 41 CALL FOBNDX # HOW MANY EQUIPPED FANOUT BOARDS?
0024040 03 000046 137020 013166 CDGSFA -001- 42 BSA FOBNDX
0024042 03 000050 130700 012754 CDGSIO 43 LL R12,MODSIZE # MEMORY MODULE (FANOUT BOARD) INCREMENT
0024044 03 000052 003320 ----- 44 ZR R15 # FANOUT BOARD COUNT (MAJOR LOOP INDEX)
0024045 03 000053 030440 043140 CTSD 45 LL R2,BASADDR
0024047 03 000055 003060 ----- 46 ZR R3 # FIRST MEMORY MODULE IN STORE UNDER TEST
0024050 03 000056 031400 024032 0024032 47 LAL RD,STCOMTBL,RA1 # ADDRESS OF STORE COMMAND TABLE
0024052 03 000060 003120 ----- 48 ZR R5 # CLEAR ERROR STORAGE REG
0024053 03 000061 003105 ----- 49 LN R4,5 # SIX STORE COMMANDS/FANOUT BOARD

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 62

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

0024054      01 FBTHLPO
0024054      02      SIOM      CKTINIT
0024054 03 000062 137020 012667 CD6S10 -002- 03      BSA      MAS10M
0024056 03 000064 040374 ----- -001- 04      DATA      CKTINIT      # INITIALIZE ALL STORE CONTROLLER
                                          # CIRCUITS
0024057 03 000065 103140 ----- 06      ZR      R6      # NO SPECIAL PARITY FOR MEMORY OPERATION
0024060 03 000066 042564 ----- 07      LX      R7,R4(RA1) # STORE COMMAND FOR THIS PASS
0024061      08      CALL      MEMOP
0024061 03 000067 03'020 013027 CD6SBS -001- 09      BSA      MEMOP
0024063      10      SIOM      FRREQA
0024063 03 000071 137020 012667 CD6S10 -002- 11      BSA      MAS10M
0024065 03 000073 044334 ----- -001- 12      DATA      FRREQA      # SET REFRESH REQUEST ON TIMING BOARD
                                          # (FA1071)
                                          # 790437
14 CSTFB7 OW 0(74)
-001- 15 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000074 *****

0024066      18 TAKEOUT 3
0024066 03 000074 106000 ----- -001- 19      LR      0,0
0024067 03 000075 006000 ----- -001- 20      LR      0,0
0024070 03 000076 006000 ----- -001- 21      LR      0,0
0024071      22      EOW      # 790437
-001- 23 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000076 *****

0024071      26      SIOM      CLKSTRT      # CANCEL FORCE-IN-WRITE-PROTECT
0024071 03 000077 137020 012667 CD6S10 -002- 27      BSA      MAS10M
0024073 03 000101 046070 137020 -001- 28      DATA      CLKSTRT      # ENABLE STORE CONTROLLER CLOCK OUTPUT
0024074      29      CALL      MEMOP
0024074 03 000102 137020 013027 CD6SBS -001- 30      BSA      MEMOP
0024076      31      SR10      SERREAD
0024076 03 000104 137020 012667 CD6S10 -002- 32      BSA      MAS10M
0024100 03 000106 047114 ----- -001- 33      DATA      SERREAD      # READ BACK STORE ERROR REGISTER(SER)
0024101 03 000107 124267 ----- 34      TBN      R11,S(F0BTERA) # TIMING ERROR A?
0024102 03 000110 055002 ----- 35      BNC      FBTHJPO      # IF NOT, DO NOT SET ERROR BIT
0024103 03 000111 026535 ----- 36      SBR      R5,R13      # SET ERROR BIT FOR THIS FANOUT BOARD
0024104      37      FBTHJPO
0024104 03 000112 104730 ----- 38      AN      R13,8      # POINT TO UPPER BITS OF RESULT REGISTER
0024105 03 000113 024260 ----- 39      TBN      R11,S(F0BTERB) # TIMING ERROR B?
0024106 03 000114 055002 ----- 40      BNC      FBTHBXO      # IF NOT DO NOT SET ERROR BIT
0024107 03 000115 026535 ----- 41      SBR      R5,R13      # SET UNSELECT ERROR INDICATOR
0024110      42      FBTHBXO
0024110 03 000116 104330 ----- 43      SN      R13,8      # RESET ERROR BIT POINTER
0024111 03 000117 036100 024054 0024054 44      BX      R4,FBTHLPO      # LAST COMMAND FOR THIS FANOUT BOARD?

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSFB

ISSUE 05

PAGE

63

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

01 # IF SO PREPARE TO TEST NEXT FANOUT BOARD, IF IT IS EQUIPPED

```

03 CSTFB7 OW 0(121) # 12989
-001- 04 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000121 *****

07 CPATCH3 BGPN 0(57) # 12989
0024113 03 000121 037000 115152 0000057 -001- 08 BL XXX574
-001- 09 NOTE CPATCH3 'CSECT'
-001- 10 NOTE ***** PATCH AREA BEGINS AT 000057 *****

0115152 -001- 13 XXX574 PATCHAREA
0115152 14 # RELOAD STORE COMMAND INDEX
0115152 15 LN R4,5
0115152 10 000057 103105 ----- 16 # POINT TO NEXT FAN OUT BOARD.
0115152 17 CPATCH3 OW 0(60) # 790513
-001- 18 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000060 *****

0115153 21 CALL WAIT #TAKE A REAL TIME BREAK
0115153 10 000060 073025 ----- -001- 22 BSAI WAIT #SUBROUTINE WAIT IS IN PROGRAM CBLM
0115154 10 000061 101474 ----- 23 AR R3,R12 #INCREMENT TO NXT FOB
0115155 24 EOW # 790513
-001- 25 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000061 *****

0115155 28 ENDP # 12989
0115155 10 000062 137000 024115 0000123 -001- 29 BL XXX581
-001- 30 NOTE ***** LAST PATCH ADDRESS USED IS 000063 *****
-001- 31 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0024115 -001- 34 XXX581 OWCONTINUE
0024115 03 000123 155002 ----- 35 BNC FBTHMSKPO
0024116 36 EOW # 12989
-001- 37 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000123 *****

0024116 03 000124 004441 ----- 40 AN R2,1 # IF SO, INCREMENT UPPER ADDRESS BITS
0024117 41 FBTHMSKPO
0024117 03 000125 104721 ----- 42 AN R13,1 # INCREMENT FANOUT BOARD COUNT
0024120 03 000126 020330 ----- 43 CR R13,FOB CNT # LAST FANOUT BOARD?
0024121 03 000127 055733 ----- 44 BNC FBTHMLPO # IF NOT, REPEAT MAJOR LOOP FOR NEXT FOB
0024054

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSFB

ISSUE 05

PAGE

64

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

0024122          01 FBTHENDO
0024122 03 000130 134520 043134 CTSD          02 STL R5,PAGSCR+26 # SAVE RESULTS FOR LATER COMPARES
0024124          03 FBTHPRPD
0024124 03 000132 104337 -----          04 SN R13,1 # LOOP INDEX FOR MASK PRODUCTION
          05 CSTFB7 OW 0(133) # 800135
-001- 06 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000133 *****

0024125 03 000133 037000 121545 0000307          09 BL P_0607
0024127          10 FBTHSKO
0024127          11 FBTHSKO
0024127          12 EOV # 800135
-001- 13 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000134 *****

0024127 03 000135 101400 -----          16 AR RO,RO # SHIFT LEFT ONCE PER PASS
0024130 03 000136 036320 024127 0024127          17 BX R13,FBTHSKO

0024132 03 000140 014520 -----          19 OR R5,RO # SET BITS UNUSED BY PREVIOUS TEST
0024133 03 000141 007465 -----          20 LSR MCHB,R5 # PREPARE FOR COMPARE(S)
0024134          21 RTN_TBL **4
0024134 03 000142 071400 -----          -001- 22 GA
0024135 03 000143 031000 024141 0024141          -001- 23 LAL RO,**4,RAO
0024137 03 000145 037000 011162 CDGNM          -001- 24 BL INTRPN03

-001- 26 # COMPARE NOT
-001- 27 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177775).
-001- 28 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0024141 03 000147 054014 ----- CDGNM          -001- 29 VFD 1,LPINDX 2,2 1,1,SUCCESS 5,0 6,NCOMPARE
0024142 03 000150 000000 177776          -001- 30 ADDR 0(0177775)

-001- 32 # FAILTST
-001- 33 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERFB00.
-001- 34 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0024144 03 000152 020017 ----- CDGNM          -001- 35 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0024145 03 000153 000001 -----          -001- 36 VFD 16,THERFB00

38 # A SELECT TIMING SIGNAL (SELCS OR SELRW) IS STUCK ACTIVE FROM FANOUT BOARD 0

-001- 41 # COMPARE NOT
-001- 42 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177775).
-001- 43 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0024146 03 000154 054014 ----- CDGNM          -001- 44 VFD 1,LPINDX 2,2 1,1,SUCCESS 5,0 6,NCOMPARE
0024147 03 000155 000000 177775          -001- 45 ADDR 0(0177775)

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSFB

ISSUE 05

PAGE

65

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CD6SFB

W770

```

-001- 01 #   FAILTST
-001- 02 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERFB01.
-001- 03 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE HCHB.
0024151 03 000157 020017 ----- CD6NM
-001- 04 #   VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0024152 03 000160 000002 -----
-001- 05 #   VFD      16,THERFB01

```

07 # A SELECT TIMING SIGNAL (SELCS OR SELRW) IS STUCK ACTIVE FROM FANOUT BOARD 1

```

-001- 10 #   COMPARE NOT
-001- 11 #   COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177773).
-001- 12 #   IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0024153 03 000161 054014 ----- CD6NM
-001- 13 #   VFD      1,L,PINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0024154 03 000162 000000 177773
-001- 14 #   ADDR      0(0177773)

```

```

-001- 16 #   FAILTST
-001- 17 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERFB02.
-001- 18 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE HCHB.
0024156 03 000164 020017 ----- CD6NM
-001- 19 #   VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0024157 03 000165 000003 -----
-001- 20 #   VFD      16,THERFB02

```

22 # A SELECT TIMING SIGNAL (SELCS OR SELRW) IS STUCK ACTIVE FROM FANOUT BOARD 2

```

-001- 25 #   COMPARE NOT
-001- 26 #   COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177767).
-001- 27 #   IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0024160 03 000166 054014 ----- CD6NM
-001- 28 #   VFD      1,L,PINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0024161 03 000167 000000 177767
-001- 29 #   ADDR      0(0177767)

```

```

-001- 31 #   FAILTST
-001- 32 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERFB03.
-001- 33 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE HCHB.
0024163 03 000171 020017 ----- CD6NM
-001- 34 #   VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0024164 03 000172 000004 -----
-001- 35 #   VFD      16,THERFB03

```

37 # A SELECT TIMING SIGNAL (SELCS OR SELRW) IS STUCK ACTIVE FROM FANOUT BOARD 3

```

-001- 40 #   COMPARE NOT
-001- 41 #   COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177757).
-001- 42 #   IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0024165 03 000173 054014 ----- CD6NM
-001- 43 #   VFD      1,L,PINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0024166 03 000174 000000 177757
-001- 44 #   ADDR      0(0177757)

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CD6SFB

ISSUE 05

PAGE

66

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG6FB

W77D

```

-001- 01 #      FAILTST
-001- 02 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERFB04.
-001- 03 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
-001- 04 #      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
-001- 05 #      VFD      16,THERFB04
0024170 03 000176 020017 ----- CDGNN
0024171 03 000177 000005 -----

```

07 # A SELECT TIMING SIGNAL (SELCS OR SELRW) IS STUCK ACTIVE FROM FANOUT BOARD 4

```

-001- 10 #      COMPARE NOT
-001- 11 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(C017737).
-001- 12 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
-001- 13 #      VFD      1,LPIIDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 14 #      ADDR      0(C017737)
0024172 03 000200 054014 ----- CDGNN
0024173 03 000201 000000 177737 -----

```

```

-001- 16 #      FAILTST
-001- 17 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERFB05.
-001- 18 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
-001- 19 #      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
-001- 20 #      VFD      16,THERFB05
0024175 03 000203 020017 ----- CDGNN
0024176 03 000204 000006 -----

```

22 # A SELECT TIMING SIGNAL (SELCS OR SELRW) IS STUCK ACTIVE FROM FANOUT BOARD 5

```

-001- 25 #      COMPARE NOT
-001- 26 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(C017767).
-001- 27 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
-001- 28 #      VFD      1,LPIIDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 29 #      ADDR      0(C017767)
0024177 03 000205 054014 ----- CDGNN
0024200 03 000206 000000 177677 -----

```

```

-001- 31 #      FAILTST
-001- 32 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERFB06.
-001- 33 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
-001- 34 #      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
-001- 35 #      VFD      16,THERFB06
0024202 03 000210 020017 ----- CDGNN
0024203 03 000211 000007 -----

```

37 # A SELECT TIMING SIGNAL (SELCS OR SELRW) IS STUCK ACTIVE FROM FANOUT BOARD 6

```

-001- 40 #      COMPARE NOT
-001- 41 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(C017757).
-001- 42 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
-001- 43 #      VFD      1,LPIIDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 44 #      ADDR      0(C017757)
0024204 03 000212 054014 ----- CDGNN
0024205 03 000213 000000 177577 -----

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG6FB ISSUE 05 PAGE 67

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

-001- 01 # FAILTST
-001- 02 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERFB07.
-001- 03 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0024207 03 000215 020017 ----- CDGNM
-001- 04 # VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0024210 03 000216 000010 -----
-001- 05 # VFD 16,THERFB07

```

07 # A SELECT TIMING SIGNAL (SELCS OR SELRW) IS STUCK ACTIVE FROM FANOUT BOARD 7

```

-001- 10 # NO3_CODE
-001- 11 # PROCESS SACC CODED ROUTINE AT ADDRESS FBMTSTK0.
0024211 03 000217 040043 000000 CDGNM
-001- 12 # VFD 1,0 2,2 7,0 6,NN03CD
0024212 03 000220 000000 024214 0024214
-001- 13 # ADDR FBMTSTK0

```

```

0024214
15 FBMTSTK0
16 CSTFB7 OW 0(222) # 800135
-001- 17 # NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000222 *****

```

```

0024214
0024214
20 FBMTSTK0
21 EQW # 800135
-001- 22 # NOTE ***** NO PATCH AT THIS ADDRESS *****

```

```

0024214 03 000222 103401 000377
0024216 03 000224 014010 -----
0024217 03 000225 007460 -----
0024220
0024220 03 000226 071400 -----
0024221 03 000227 031000 024225 0024225
0024223 03 000231 037000 011162 CDGNM
-001- 25 # LI RD,B(11111111) # MASK FOR SELECT RESULTS
-001- 26 # NR RD,R8 # ZERO UNSELECT RESULTS
-001- 27 # LSR MCHB,RD # PREPARE FOR COMPARE
-001- 28 # RTN_TBL **4
-001- 29 # GA
-001- 30 # LAL RD,***,RAD
-001- 31 # BL INTRPN03

```

```

-001- 33 # COMPARE
-001- 34 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(00000000).
-001- 35 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0024225 03 000233 050014 ----- CDGNM
0024226 03 000234 000000 000000
-001- 36 # VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 37 # ADDR 0(00000000)

```

```

-001- 39 # FAILBIT
-001- 40 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS THERFBXX
-001- 41 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0024230 03 000236 020020 ----- CDGNM
0024231 03 000237 000001 -----
-001- 42 # VFD 1,0 2,1 5,0 2, 6,NFLBITS
-001- 43 # VFD 16,THERFB

```

45 # AN ERROR INDICATES A FAULT IN THE GENERATION OR VERIFICATION OF STORE TIMING

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSFB

ISSUE 05

PAGE

68

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

-001- 01 # NO3_CODE
-001- 02 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBTHUSLO.
0024232 03 000240 040043 000000 CDGNM
0024233 03 000241 000000 024235 0024235 -001- 03 VFD 1,0 2,2 7,0 6,NN03CD
-001- 04 ADDR FBTHUSLO

06 CSTFB7 OW 0(243) # 790286
-001- 07 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000243 *****

10 CSTFB7 OW 0(243) # 790437
-001- 11 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000243 *****

0024235 14 FBTHUSLO
0024235 03 000243 106030 ----- 15 LR R1,R8
0024236 16 CALL F0BNDX
0024236 03 000244 037020 013166 CDGSFA -001- 17 BSA F0BNDX
0024240 03 000246 104217 ----- 18 SN F0BCNT,1
0024241 03 000247 003401 177777 19 LI R0,0(177777)
0024243 20 FBTHUSLO
0024243 03 000251 101400 ----- 21 AR R0,0
0024244 -001- 22 EOW # 790437
-001- 23 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000251 *****

0024244 26 BX F0BCNT,FBTHUSLO+6
0024246 -001- 27 EOW # 790286
-001- 28 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000253 *****

0024246 03 000254 010430 ----- 32 RRN R1,6 # UNSELECT ERROR RESULTS IN BITS 0-7
0024247 03 000255 034420 043134 CTSD 33 STL R1,F0BNUM # SAVE RESULTS FOR LATER COMPARE
0024251 03 000257 014420 ----- 34 OR R1,R0 # SET BITS NOT AFFECTED BY UNSELECT TESTS
0024252 03 000260 007461 ----- 35 LSR WCHB,R1 # PREPARE FOR COMPARES
0024253 36 RTN_TBL ***
0024253 03 000261 071400 ----- -001- 37 GA
0024254 03 000262 031000 024260 0024260 -001- 38 LAL R0,++A,RAO
0024256 03 000264 037000 011162 CDGNM -001- 39 BL INTRPN03

-001- 41 # COMPARE NOT
-001- 42 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 43 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0024260 03 000266 054014 ----- CDGNM -001- 44 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0024261 03 000267 000000 177777 -001- 45 ADDR 0(0177777)

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 69

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

-001- 01 # FAILTST
-001- 02 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS THERUSFB.
-001- 03 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0024263 03 000271 020017 ----- CDGNM
0024264 03 000272 000011 -----
-001- 04 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 05 VFD 16,THERUSFB

07 # CONSTANT UNSELECTED-FANOUT-BOARD-TIMING ERROR INDICATES FAULT WHICH CANNOT
08 # BE RESOLVED FURTHER THAN ANY EQUIPPED FANOUT BOARD OR THE TIMING CHECK CIRCUIT

-001- 11 # NO3 CODE
-001- 12 # PROCESS 3ACC CODED ROUTINE AT ADDRESS FBTHUSL1.
0024265 03 000273 040043 000000 CDGNM
0024266 03 000274 000000 024270 0024270
-001- 13 VFD 1,0 2,2 7,0 6,NNO3CD
-001- 14 ADDR FBTHUSL1

0024270 16 FBTHUSL1
0024270 03 000276 107470 ----- 17 LSR MCHB,R8 # PREPARE FOR COMPARE
0024271 18 RTN_TBL **4
0024271 19 GA
-001- 19
0024272 03 000277 071400 ----- -001- 20 LAL RD,**A,RAD
0024272 03 000300 031000 024276 0024276 -001- 21 BL INTRPNO3
0024274 03 000302 037000 011162 CDGNM

-001- 23 # COMPARE
-001- 24 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(00000000).
-001- 25 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0024276 03 000304 050014 ----- CDGNM
0024277 03 000305 000000 000000
-001- 26 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 27 ADDR 0(00000000)

-001- 29 # FAILBIT
-001- 30 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS THUSFBXX
-001- 31 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0024301 03 000307 020020 ----- CDGNM
0024302 03 000310 000012 -----
-001- 32 VFD 1,0 2,1 5,0 2, 6,NFLBITS
-001- 33 VFD 16,THUSFB

35 # A MODULE ENABLE (EN1) IS STUCK ACTIVE ON ONE OF THE EQUIPPED FANOUT BOARDS
36 CSTFB7 OW 0(311) # 790437
-001- 37 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000311 *****

0024303 03 000311 040043 000000 40 DATA 0(040043) #GO TO NO.3 CODE
0024304 03 000312 000000 024306 41 ADDR STFOBTST
0024306 42 STFOBTST
0024306 43 CALL F0BNDX
0024306 44 BSA F0BNDX
0024310 03 000314 137020 013166 CDGSFA -001- 45 LL R12,MODSIZE #MEMORY MOD (F0B) INCREMENT
0024310 03 000316 130700 012754 CDGSI0 46 ZR R13 #SET ADDRESS TO TEST TIMING OUTPUTS
0024312 03 000320 003320 ----- 47 LL R2,BASADDR
0024313 03 000321 030440 043140 CTSD 48 ZR R3
0024315 03 000323 003060 ----- 49 ZR R5
0024316 03 000324 003120 -----

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 70

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

0024317      01 FOBUSLP
0024317 03 000325 103561 104200      02      LI      R7,0(104200)
0024321 03 000327 003401 177777      03      LI      R0,0(177777)
0024323      04      TAKEOUT 3
0024323 03 000331 006000 -----      -001- 05      LR      0,0
0024324 03 000332 006000 -----      -001- 06      LR      0,0
0024325 03 000333 006000 -----      -001- 07      LR      0,0
0024326 03 000334 003140 -----      08      R6
0024327      09      CALL MEMOP      # NO SPECIAL PARITY
0024327 03 000335 037020 013027 CDGSBS -001- 10      BSA MEMOP      # INITIATE NORMAL WRITE(OFF-LINE)
0024331      11      EOW      # 790437
      12      NOTE      ***** THE LAST ADDRESS OVERWRITTEN IS 000336 *****

0024331      15      SIOM MASIOM      # INITIALIZE STORE CONTROLLER
0024331 03 000337 137020 012667 CDGSIO -002- 16      BSA MASIOM
0024333 03 000341 046071 137020      -001- 17      DATA MASIOM      # INITIALIZE STORE CONTROLLER
0024334      18      SIOM CLKSTOP      # STOP STORE CONTROLLER CLOCK OUTPUT
0024334 03 000342 137020 012667 CDGSIO -002- 19      BSA MASIOM
0024336 03 000344 046074 -----      -001- 20      DATA CLKSTOP      # DISABLE STORE CONTROLLER CLOCK OUTPUT
0024337 03 000345 103140 -----      21      ZR      # NO SPECIAL PARITY
0024340      22      CALL MEMOP
0024340 03 000346 037020 013027 CDGSBS -001- 23      BSA MEMOP
0024342 03 000350 106000 -----      24      NOP
0024343 03 000351 006000 -----      25      NOP
0024344      26      SIOM FOBMT      # ENABLE FOB MAINT TEST
0024344 03 000352 037020 012667 CDGSIO -002- 27      BSA MASIOM
0024346 03 000354 041550 -----      -001- 28      DATA FOBMT      # FANOUT BOARD MAINTENANCE TEST
0024347 03 000355 106000 -----      29      NOP
0024350      30      SIOM CLKSTRT      # ENABLE STORE CONTROLLER CLOCK OUTPUT
0024350 03 000356 037020 012667 CDGSIO -002- 31      BSA MASIOM
0024352 03 000360 046070 137020      -001- 32      DATA CLKSTRT      # ENABLE STORE CONTROLLER CLOCK OUTPUT
0024353      33      CALL MEMOP      # PERFORM MAINT WRITE
0024353 03 000361 137020 013027 CDGSBS -001- 34      BSA MEMOP
0024355 03 000363 106000 -----      35      NOP
0024356      36      SRIO SERREAD
0024356 03 000364 037020 012667 CDGSIO -002- 37      BSA MASIOM
0024360 03 000366 047114 -----      -001- 38      DATA SERREAD      # READ BACK STORE ERROR REGISTER(SER)
0024361 03 000367 124260 -----      39      TBN      # TIMING ERROR B (UNSELECT)?
      40 CSTFB7 OW      # 790437
      41      NOTE      ***** THE FIRST ADDRESS OVERWRITTEN IS 000370 *****

0024362 03 000370 054002 ----- 0024364      44      BC      NOERR_B      #SHOULD GET UNSEL ERROR
0024363 03 000371 026535 -----      45      SBR      R5,R13
0024364      46      EOW      # 790437
      47      NOTE      ***** THE LAST ADDRESS OVERWRITTEN IS 000371 *****

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 71

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

0024364          01 NOERR_B
0024364 03 000372 124267 -----          02      TBN      R11,S(F0BTERA)      # ALSO GETTING AN ERROR A INCICATES A
                                                # VALID CYCLE
                                                # 790437
-001- 04 CSTFB7 OW      0(373)
      05      NOTE      ***** THE FIRST ADDRESS OVERWRITTEN IS 000373 *****

0024365 03 000373 055002 ----- 0024367      08      BNC      NOERR_A      #NO SEL ERROR
0024366 03 000374 026535 -----          09      SBR      R5,R13
0024367          10      EOW      # 790437
-001- 11      NOTE      ***** THE LAST ADDRESS OVERWRITTEN IS 000374 *****

          14 CSTFB7 OW      0(375)      # 790437
-001- 15      NOTE      ***** THE FIRST ADDRESS OVERWRITTEN IS 000375 *****

0024367          18 NOERR_A
0024367 03 000375 104721 -----          19      AN      R13,1      #INCR FOB NUMBER
          20 CPATCH BGNP      0(774)      # 790437
0024370 03 000376 037000 112426 0000774 -001- 21      BL      XXX660
          22      NOTE      CPATCH 'CSECT'
-001- 23      NOTE      ***** PATCH AREA BEGINS AT 000774 *****

0112426          -001- 26 XXX660 PATCHAREA
0112426 05 000774 120330 -----          27      CR      R13,F0BCNT      #LAST FOB?
0112427 05 000775 050000 024372 0000400      28      BCL      UNSELTST      #IF YES GET RESULTS
0112431 05 000777 001474 -----          29      AR      R3,R12      #INCR ADDRESS
0112432 05 001000 055002 ----- 0112434      30      BNC      ADDCY      #TST CARRY
0112433 05 001001 004441 -----          31      AN      R2,1      #INCR ADDRESS
0112434          32 ADDCY
0112434 05 001002 137000 024317 0000325      33      BL      F0BUSLP      #DO NXT FOB
0112434          34      ENDP      NR      # 790437
-001- 35      NOTE      ***** LAST PATCH ADDRESS USED IS 001003 *****
-001- 36      NOTE      ***** NUMBER OF PATCH WORDS USED IS 6 (DECIMAL) *****

0024372          39 UNSELTST
0024372 03 000400 104337 -----          40      SN      R13,1      #SETUP CONSTANT FOR MASK
0024373          41 UNSELMASK
0024373 03 000401 101400 -----          42      AR      R0,R0      #CALCULATE MASK FOR NUM OF FOB'S
0024374 03 000402 036320 024373 0024373      43      BX      R13,UNSELMASK
0024376 03 000404 006000 -----          44      NOP
0024377 03 000405 015400 -----          45      COM
0024400 03 000406 014120 -----          46      NR      R5,R0      #MASK RESULTS
0024401 03 000407 007465 -----          47      LSR      MCHB,R5      #PREPARE FOR COMPARE
0024402 03 000410 071400 -----          48      GA
0024403 03 000411 031000 024407 0024407      49      LAL      R0,++4,RAD      #RETURN TO TABLES

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 72

TEST 47 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB

W770

0024405 03 000413 037000 011162 CDGNM
002440701
02
-001- 03BL
EOW
NOTE

INTRPN03

790437

***** THE LAST ADDRESS OVERWRITTEN IS 000414 *****

0024407 03 000415 050014 ----- CDGNM
0024410 03 000416 000000 000000-001- 06 #
-001- 07 #
-001- 08 #
-001- 09
-001- 10

COMPARE

COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).

IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.

VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
ADDR 0(0000000)0024412 03 000420 020020 ----- CDGNM
0024413 03 000421 000022 ------001- 12 #
-001- 13 #
-001- 14 #
-001- 15
-001- 16

FAILBIT

FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS TIMRFBXX

WHERE XX IS THE LOWEST FAILING BIT NUMBER.

VFD 1,0 2,1 5,0 2, 6,NFLBITS
VFD 16,TIMRFB18 # TIMING OUTPUTS (GRASO OR GCASO) ARE IN ERROR. INTERNAL TO THE
19 # PACK THEY CAN BE EITHER OPEN OR SHORTED TO CREATE THIS ERROR.
20 BYPASS

0024414

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDG5FB

ISSUE 05

PAGE

73

TEST 47 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 47 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

```

0024414 03 000422 000200 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTESTSEG

```

```

11 # THIS SEGMENT VERIFIES THE OPERATION OF TWO ENABLES ON THE TIMING SIGNAL
12 # CHECK CIRCUITRY THAT WERE NOT CHECKED PREVIOUSLY. SPECIFICALLY, THE ENABLE ON
13 # THE GATED INPUT OF THE READ/WRITE DETECT FF (RW) WHICH COMES FROM BIT 4 OF THE
14 # TIMING SHIFT REGISTER IS CHECKED BY STEPPING THRU A NORMAL WRITE CYCLE IN THE
15 # STORE UNDER TEST UP UNTIL THE ACTIVATION OF BIT 3 IN THE TIMING SHIFT
16 # REGISTER. THIS WILL SET THE CHIP SELECT FF (CS) AND, IN TURN, CAUSE THE
17 # DETECT-CHIP-SELECT FF (DETC) TO BE SET. IF THE ERROR STROBE (ERSTB) FROM
18 # BIT 4 IS STUCK ACTIVE, THEN THE READ/WRITE DETECT FF (RW) WILL ALSO BE SET
19 # AND THE FANOUT BOARD TIMING ERROR 'A' WILL NOT BE ACTIVE AT THIS POINT.
20 # OTHERWISE, IF THE ERROR STROBE IS NOT STUCK, THEN AN ERROR WILL BE INDICATED
21 # DUE TO THE ABSENCE OF THE READ/WRITE DETECT AT THIS POINT. THE ENABLE ON
22 # THE GATED OUTPUT OF THE READ/WRITE DETECT FF (RW) WHICH COMES FROM THE DETECT-
23 # CHIP-SELECT FF (DETC) IS CHECKED BY ACTIVATING THE ERROR STROBE (ERSTB) VIA
24 # BIT 4 DURING A NORMAL WRITE WHICH SHOULD SET THE READ/WRITE DETECT FF. THIS
25 # IS FOLLOWED BY THE ACTIVATION OF SHIFTER BIT 0 WHICH SHOULD RECLEAR THE
26 # DETECT-CHIP-SELECT FF (DETC). IF THE ENABLE ON THE OUTPUT OF THE RW FF IS
27 # STUCK ACTIVE, NO FANOUT BOARD TIMING ERROR WILL OCCUR; OTHERWISE DISABLING
28 # THE OUTPUT OF THE READ/WRITE DETECT FF AT THIS POINT SHOULD CAUSE A FANOUT
29 # BOARD TIMING ERROR 'A'.

```

```

-001- 32 # NO3 CODE
-001- 33 # PROCESS 3ACC CODED ROUTINE AT ADDRESS ERSTBCK.
0024416 03 000423 040043 000000 CDGNM -001- 34 VFD 1,0 2,2 7,0 6,NNO3CD
0024416 03 000424 000000 024420 0024420 -001- 35 ADDR ERSTBCK

```

```

0024420 37 ERSTBCK
0024420 38 SIOM MASCINT
0024420 03 000426 137020 012667 CDG5IO -002- 39 BSA MASION # INITIALIZE STORE CONTROLLER
0024422 03 000430 046071 137020 -001- 40 DATA MASCINT # DISABLE STORE CONTROLLER CLOCK OUTPUT
0024423 41 SIOM CLKSTOP
0024423 03 000431 137020 012667 CDG5IO -002- 42 BSA MASION # DISABLE STORE CONTROLLER CLOCK OUTPUT
0024425 03 000433 046074 ----- -001- 43 DATA CLKSTOP
0024426 03 000434 130700 043140 CTSD 44 LL R12,BASADDR # FIRST MEMORY MOD IN STORE UNDER TEST
0024430 03 000436 003320 ----- 45 ER R13
0024431 46 NMLWRIT RAD
0024431 03 000437 003561 106200 -001- 47 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0024433 03 000441 003741 000000 -001- 48 LI R14,0 # TO BE WRITTEN - SD0-15
0024435 03 000443 003761 000000 -001- 49 LI R15,0 # TO BE WRITTEN - SD16-23

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 74

TEST 47 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB

W77D

```

-001- 01 # IF ADDRESS(RAD) IS ADDRESS REG PAIR(RAO), LOAD R2 & R3 DIRECTLY FROM RAD
0024437 03 000445 006054 ----- -001- 02 LR R2,R12
0024440 03 000446 006075 ----- -001- 03 LR R3,R13
0024441 03 000447 003140 ----- -001- 04 R6 R6
0024442 ----- -001- 05 CALL MEMOP # NO SPECIAL PARITY
0024442 03 000450 037020 013027 CDG5BS -002- 06 BSA MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0024444 03 000452 103701 000003 07 LI R12,3 # FORCE EXACTLY 4 CLOCK CYCLES IN MAIN
# STORE CONTROLLER
0024446 ----- 09 CLK532
0024446 ----- 10 SIOH MASCLKNIFAK010 # FAKE FIRST HALF OF STORE CLOCK CYCLE
0024446 03 000454 137020 012667 CDG5IO -002- 11 BSA MASIOH
0024450 03 000456 056074 137020 -001- 12 DATA MASCLKNIFAK010 # FAKE SECOND HALF OF STORE CLOCK CYCLE
0024451 ----- 13 SIOH MASIOH # FAKE SECOND HALF OF STORE CLOCK CYCLE
0024451 03 000457 137020 012667 CDG5IO -002- 14 BSA MASIOH
0024453 03 000461 056076 136300 -001- 15 DATA MASCLKNIFAK010 # FAKE FIRST HALF OF STORE CLOCK CYCLE
0024454 03 000462 136300 024446 0024446 16 BX R12,CLK532
0024456 ----- 17 SIOH FBIT09
0024456 03 000464 037020 012667 CDG5IO -002- 18 BSA MASIOH
0024460 03 000466 146074 137020 -001- 19 DATA FBIT09 # COLLECT ERRORS IN STORE ERROR REGISTER
0024461 ----- 20 SRI0 SERREAD
0024461 03 000467 137020 012667 CDG5IO -002- 21 BSA MASIOH
0024463 03 000471 047114 ----- -001- 22 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0024464 ----- 23 TEST S(F0BTERA),1TEST,TIMCKER
0024464 03 000472 124267 ----- -001- 24 T0N R11,S(F0BTERA)
0024465 03 000473 054011 ----- 0024476 -001- 25 BC P685
0024466 03 000474 007473 ----- -001- 26 LSR MCHB,R11
0024467 03 000475 071400 ----- -002- 27 GA
0024470 03 000476 031000 024474 0024474 -002- 28 LAL RD,++4,RAD
0024472 03 000500 037000 011162 CDGNM -002- 29 BL INTRPN03
-002- 31 # FAILTST
-002- 32 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS TIMCKER.
-002- 33 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0024474 03 000502 020017 ----- CDGNM 1,0 2,1 3,0 2,0 6,NFAILTST
0024475 03 000503 000032 137020 -002- 34 VFD
-002- 35 VFD 16,TIMCKER
-001- 37 # TROUBLE PRINTOUT DATA = CONTENTS OF R11 IN ON-LINE PROCESSOR
0024476 ----- 38 P685
-001- 39 # ERROR STROBE(ERSTB) ON GATED INPUT OF READ/WRITE DETECT FF(RW) IS STUCK ACTIVE
42 # NEXT, CHECK ENABLE ON GATED OUTPUT OF READ/WRITE DETECT FF (RW)
0024476 ----- 44 RWG1CK
0024476 ----- 45 SIOH CKTINIT
0024476 03 000504 137020 012667 CDG5IO -002- 46 BSA MASIOH
0024500 03 000506 040374 ----- -001- 47 DATA CKTINIT # INITIALIZE ALL STORE CONTROLLER
# CIRCUITS
0024501 03 000507 130700 043140 CTSD 49 LL R12,BASADDR

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 75

TEST 47 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

```

0024503 03 000511 003320 ----- 01 ZR R13 # FIRST MEMORY MOD IN STORE UNDER TEST
0024504 ----- 02 NMLWRIT RAO
0024504 03 000512 003561 106200 -001- 03 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0024506 03 000514 003741 000000 -001- 04 LI R14,0 # TO BE WRITTEN - SD0-15
0024510 03 000516 003761 000000 -001- 05 LI R15,0 # TO BE WRITTEN - SD16-23
-001- 06 # IF ADDRESS(RAD) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
0024512 03 000520 006054 ----- -001- 07 LR R2,R12
0024513 03 000521 006075 ----- -001- 08 LR R3,R13
0024514 03 000522 003140 ----- -001- 09 ZR R6 # NO SPECIAL PARITY
-001- 10 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0024515 03 000523 037020 013027 CDGSFB -002- 11 BSA MEMOP
0024517 ----- 12 CLOCK 4 # SET READ/WRITE FF VIA ERROR STROBE(ERST
-001- 14 # FORCE EXACTLY 4 CLOCK CYCLES IN MAIN STORE CONTROLLER
-001- 15 LI R12,3
-001- 16 CLP692
0024521 ----- BSA MASIOM
0024521 03 000527 137020 012667 CDGSIO -003- 17 DATA MASCLK(FAK010 # FAKE FIRST HALF OF STORE CLOCK CYCLE
0024523 03 000531 056076 137020 -002- 18 BSA MASIOM
0024524 03 000532 137020 012667 CDGSIO -003- 19 DATA MASCLKN(FAK010 # FAKE SECOND HALF OF STORE CLOCK CYCLE
0024526 03 000534 056074 136300 -002- 20 BX R12,CLP692
0024527 03 000535 136300 024521 0024521 -001- 21 SIOM FLSD # CLEAR DETECT-CHIP-SELECT FF (DETC5)
0024531 ----- 22 BSA MASIOM
0024531 03 000537 037020 012667 CDGSIO -002- 23 DATA FLSD # START ZERO INTO MAIN SHIFTER
0024533 03 000541 046156 137020 -001- 24 SIOM FBITD9
0024534 ----- BSA MASIOM
0024534 03 000542 137020 012667 CDGSIO -002- 26 DATA FBITD9 # COLLECT ERRORS IN STORE ERROR REGISTER
0024536 03 000544 146074 137020 -001- 27 SRIO SERREAD
0024537 ----- 28 BSA MASIOM
0024537 03 000545 137020 012667 CDGSIO -002- 29 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0024541 03 000547 047114 ----- -001- 30 SERREAD # 790437
31 CSTFB7 OW C(55D)
-001- 32 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000550 *****

0024542 03 000550 124267 ----- 35 TBN R11,(F0BTERA)
0024543 03 000551 071400 ----- 36 GA #RESTORE REGISTERS
0024544 03 000552 054010 ----- 37 BC P657
0024545 03 000553 007473 ----- 38 LSR MCHB,R11
0024546 03 000554 031000 024552 0024552 39 LAL RD,*+4,RAD
0024550 03 000556 037000 011162 CDGNH 40 BL INTRPN03
-001- 41 # FAILTST
-001- 42 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS TIMCKER.
-001- 43 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0024552 03 000560 020017 ----- CDGNH -001- 44 VFD 1,0 2,1 5,0 2,0 6,FAILTST
0024553 03 000561 000032 137020 -001- 45 VFD 16,TIMCKER

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 76

TEST 47 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

0024554
0024554

01 P657
02 EOW # 790437
-001- 03 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000561 *****

06 # DETECT-CHIP-SELECT ENABLE ON GATED OUTPUT OF READ/WRITE FF IS STUCK ACTIVE

09 # NOTE: THIS TEST ALSO CHECKS THE CLEAR LEAD (CTH10,CTLD,D21) ON THE DETECT-
10 # CHIP-SELECT FF (DETC) FOR STUCK-INACTIVE (HIGH) FAULT.

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 77

TEST 47 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

01 CSTFB7 OW 0(562),0(564) # 12705
 -001- 02 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000562 *****

0024554			05	FINALE	FB7INIT	
0024554	03	000562 137020 012771 CDGSIO	-002- 06	BSA	FINAL	
0024556	03	000564 137000 024015 0024015	-001- 07	BL	BKCSTFB7	
0024560	03	000566 171400 -----	-001- 08	GA	PASSTST	# TEST COMPLETED
0024561	03	000567 037000 011725 CDGNH	-001- 09	BL		# 12705
0024561			-001- 10	EDW		
			-001- 11	NOTE	***** THE LAST ADDRESS OVERWRITTEN IS 000570 *****	

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 78

TEST 48

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 48, MAIN_STORE_FANOUT_BOARD
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

```

0024563

-001- 10 CSTFBB CSECT

0024563 04 000000 000145 ----- CDGNM

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN

```

18 # SEGMENT 1
19 # THIS SEGMENT CHECKS THOSE ENABLES ON THE CHIP SELECT(CS) FF THAT ...
20 # WERE NOT TESTED PREVIOUSLY. THIS INCLUDES THE COMMON CLEAR (CO) WHICH IS
21 # ACTIVATED BY INITIALIZE (INITOR) AND THE SPECIAL CLEAR (BCO) WHICH SHOULD BE
22 # ENABLED BY BIT 9 DURING REFRESH OPERATIONS OR BIT10 DURING A NORMAL STORE
23 # ACCESS. BY CONTROLLING THE STORE CLOCK DURING A NORMAL WRITE CYCLE AND
24 # CLEARING CHIP SELECT WITH INITIALIZE AFTER BIT 3, IT IS POSSIBLE TO DETERMINE
25 # WHETHER THE COMMON CLEAR (CO) IS STUCK INACTIVE (HIGH) ON THE CHIP SELECT FF.
26 # THE OTHER STATE OF THE INITIALIZE IS CHECKED FUNCTIONALLY IN A LATER TEST IN
27 # CONJUNCTION WITH THE TESTING OF THE INPUTS AND OUTPUTS OF THE DATA REGISTER
28 # IN THE STORE CONTROLLER. AT THE SAME TIME THE BIT 9 AND BIT 10 ENABLES ON THE
29 # CLEAR SIDE OF THE CHIP SELECT FF ARE CHECKED FOR STUCK-HIGH FAULTS, AND THE
30 # SPECIAL CLEAR (BCO) INPUT TO CHIP SELECT IS CHECKED FOR STUCK-ACTIVE (LOW).
31 # THE TWO FAULTS WHICH REMAIN UNDIAGNOSED ARE THE REFRESH (RM1) AND NORMAL (RMD)
32 # ENABLES TO SPECIAL CLEAR IN A STUCK-ACTIVE (HIGH) STATE. THESE WILL REMAIN
33 # UNDIAGNOSABLE UNTIL AN LDI IS INCORPORATED IN THE TIMING CIRCUIT TO ALLOW THE
34 # DEACTIVATION OF SHIFTER BIT 9 (TO TEST RM1) AND THE ACTIVATION OF BIT 10
35 # (TO TEST RMD).

```

```

38 # SEGMENT 2
39 # THIS SEGMENT VERIFIES THE OPERATION OF THE CIRCUIT WHICH CHECKS THAT CHIP
40 # SELECT TIMING SIGNALS ARE NOT GETTING THRU UNSELECTED FANOUT BOARDS TO THEIR
41 # ASSOCIATED MEMORY PLANES. THE VERIFICATION IS VASTLY SIMPLIFIED BY A SPECIAL
42 # FANOUT-BOARD-MAINTENANCE-TEST STATE (FDBMT) WHICH FORCES ALL OF THE FANOUT
43 # BOARDS TO APPEAR UNSELECTED FOR THE BENEFIT OF THE CHECK CIRCUIT. AS EACH
44 # EQUIPPED FANOUT BOARD IS ACCESSED (WITH FDBMT ACTIVE) IT SHOULD INDICATE AN
45 # UNSELECT ERROR TO THE UNSELECT CHECK CIRCUIT IN THE CONTROLLER.

```

STORE FANOUT BOARDS TEST-PART B

PR-1c926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 79

TEST 48

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB W77D

```

01 CSTFB8 OW 0(1),0(16) # 12705
-001- 02 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000001 *****

0024564
0024564 04 000001 000144 ----- CDGNN
0024565 04 000002 047707 ----- CDGNN
0024566 04 000003 000040 000001

0024570 04 000005 020005 ----- CDGNN
0024571 04 000006 106631 -----

0024572 04 000007 040043 000000 CDGNN
0024573 04 000010 000000 024573 0024575

0024575 04 000012 103501 000151 TTYTBL
0024577 04 000014 034500 043132 CTSD

0024601 04 000016 103240 -----
0024602 04 000017 004257 -----

0024603 04 000020 072652 ----- CDGNN
0024604 04 000021 037020 012757 CDGSI0
0024606 04 000023 172652 ----- CDGNN
0024607 04 000024 137020 012667 CDGSI0
0024611 04 000026 046071 -----

0024612 04 000027 171400 -----
0024613 04 000030 031000 024617 0024617
0024615 04 000032 037000 011162 CDGNN

05 FB8INIT PREPARE
-002- 06 # RTN_BLM
-002- 07 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-002- 08 VFD 1,0 2,0 6,0 1,1 6,NRTNBLM

-002- 10 # SEND
-002- 11 # SEND 0(0000001) TO OFF-LINE MCHB.
-002- 12 # PARITY IS 0(2).
-002- 13 VFD 1,0 2,2 7,8(0111111) 6,N2SEND
-002- 14 ADDR 0(0000001),0(2)

-002- 16 # MICRO
-002- 17 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 18 # TO FIELD = MSXT FROM FIELD = MCHBFX
-002- 19 VFD 1,0 2,1 7,0 6,MNICO
-002- 20 VFD 8,MSXT 8,MCHBFX

-002- 22 # NO3_CODE
-002- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
-002- 24 VFL 1,0 2,2 7,0 6,MN03CD
-002- 25 ADDR **2

-001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
-002- 28 LI R4,MAS
-001- 29 STL R4,PAGSCR+24
-001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
-001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
-001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(10ADDR) IN PAGING BUFFER(PAGSCR)

-001- 34 ZR LOOPIND
-001- 35 SN LOOPIND,1 #ASSURE THAT LOOPIND IS ZERO BEFORE
#PROCEEDING WITH TEST

-001- 37 HN LOOPIND,LOOPIND
-002- 38 BSA CONTRPREF
-001- 39 HN LOOPIND,LOOPIND
-003- 40 BSA MASIOM
-002- 41 DATA MASCINT # INITIALIZE STORE CONTROLLER

-002- 43 GA
-002- 44 LAL RD,**A,RAO
-002- 45 BL INTRPNO3

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 80

TEST 48

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W770

0024617

D1
-001- 02EOW
NOTE

12705

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 81

TEST 48 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W770

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 48 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

0024617 04 000034 000100 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,0(1) 6,NTESTSEG

```

11 # THIS SEGMENT CHECKS THOSE ENABLES ON THE CHIP SELECT(CS) FF THAT
12 # WERE NOT TESTED PREVIOUSLY. THIS INCLUDES THE COMMON CLEAR (CD) WHICH IS
13 # ACTIVATED BY INITIALIZE (INITDA) AND THE SPECIAL CLEAR (BCD) WHICH SHOULD BE
14 # ENABLED BY BIT 9 DURING REFRESH OPERATIONS OR BIT10 DURING A NORMAL STORE
15 # ACCESS. BY CONTROLLING THE STORE CLOCK DURING A NORMAL WRITE CYCLE AND
16 # CLEARING CHIP SELECT WITH INITIALIZE AFTER BIT 3, IT IS POSSIBLE TO DETERMINE
17 # WHETHER THE COMMON CLEAR (CD) IS STUCK INACTIVE (HIGH) ON THE CHIP SELECT FF.
18 # THE OTHER STATE OF THE INITIALIZE IS CHECKED FUNCTIONALLY IN A LATER TEST IN
19 # CONJUNCTION WITH THE TESTING OF THE INPUTS AND OUTPUTS OF THE DATA REGISTER
20 # IN THE STORE CONTROLLER. AT THE SAME TIME THE BIT 9 AND BIT 10 ENABLES ON THE
21 # CLEAR SIDE OF THE CHIP SELECT FF ARE CHECKED FOR STUCK-HIGH FAULTS, AND THE
22 # SPECIAL CLEAR (BCD) INPUT TO CHIP SELECT IS CHECKED FOR STUCK-ACTIVE (LOW).
23 # THE TWO FAULTS WHICH REMAIN UNDIAGNOSED ARE THE REFRESH (RM1) AND NORMAL (RMD)
24 # ENABLES TO SPECIAL CLEAR IN A STUCK-ACTIVE (HIGH) STATE. THESE WILL REMAIN
25 # UNDIAGNOSABLE UNTIL AN LDI IS INCORPORATED IN THE TIMING CIRCUIT TO ALLOW THE
26 # DEACTIVATION OF SHIFTER BIT 9 (TO TEST RM1) AND THE ACTIVATION OF BIT 10
27 # (TO TEST RMD).

```

```

-001- 30 # NO3 CODE
-001- 31 # PROCESS 3ACC CODED ROUTINE AT ADDRESS CSINITCK.
0024620 04 000035 040043 000000 CDGNM VFD 1,0 2,2 7,0 6,NN03CD
0024621 04 000036 000000 024623 0024623 -001- 32 ADDR CSINITCK
-001- 33

```

37 # CHECK THAT THE INITIALIZE ENABLE TO CHIP SELECT IS NOT STUCK INACTIVE

```

0024623 39 CSINITCK
0024623 04 000040 130700 043140 CTSD 40 LL R12,BASADDR
0024625 04 000042 003320 ----- 41 ZR R13 # FIRST MEMORY MODULE IN STORE UNDER TEST
0024626 42 S10M CKTINIT
0024626 04 000043 037020 012667 CDGSIO -002- 43 BSA M4S10M
0024630 04 000045 040374 ----- -001- 44 DATA CKTINIT # INITIALIZE ALL STORE CONTROLLER CIRCUITS
0024631 46 NMLWRIT RAD
0024631 04 000046 103561 106200 -001- 47 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0024633 04 000050 003741 000000 -001- 48 LI R14 # TO BE WRITTEN - SD0-15
0024635 04 000052 003761 000000 -001- 49 LI R15,0 # TO BE WRITTEN - SD16-23

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 82

TEST 48 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W770

```

0024637 04 000054 004054 ----- -001- 01 # IF ADDRESS(RAD) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
0024640 04 000055 006075 ----- -001- 02 LR R2,R12
0024641 04 000056 003140 ----- -001- 03 LR R3,R13
0024642 ----- -001- 04 ZR R6 # NO SPECIAL PARITY
0024642 04 000057 037020 013027 CDGSBS -001- 05 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0024644 ----- -002- 06 BSA MEMOP
0024644 ----- 07 CLOCK 3 # ACTIVATE BIT 3 & SET CHIP SELECT FF
-001- 08 # FORCE EXACTLY 3 CLOCK CYCLES IN MAIN STORE CONTROLLER
-001- 09 LI R12,2
-001- 10 CLP738
0024644 04 000061 103701 000002 -003- 11 BSA MASION
0024646 ----- -002- 12 DATA MASCLK1FAK01D # FAKE FIRST HALF OF STORE CLOCK CYCLE
0024646 04 000063 137020 012667 CDGSIO -001- 13 BSA MASION
0024650 04 000065 056076 137020 -002- 14 DATA MASCLKN1FAK01D # FAKE SECOND HALF OF STORE CLOCK CYCLE
0024651 04 000066 137020 012667 CDGSIO -001- 15 BX R12,CLP738
0024653 04 000070 056074 136300 -002- 16 SIOM CKTINIT # CLEAR CHIP SELECT
0024654 04 000071 136300 024646 0024646 -002- 17 BSA MASION
0024656 ----- -001- 18 DATA CKTINIT # INITIALIZE ALL STORE CONTROLLER CIRCUITS
0024660 04 000073 037020 012667 CDGSIO -002- 20 SIOM CLKSTRT
0024660 04 000075 040374 137020 -002- 21 BSA MASION
0024661 ----- -001- 22 DATA CLKSTRT # ENABLE STORE CONTROLLER CLOCK OUTPUT
0024661 04 000076 137020 012667 CDGSIO -002- 23 SRIO SERREAD
0024663 04 000100 046070 137020 -002- 24 BSA MASION
0024664 ----- -001- 25 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0024664 04 000101 137020 012667 CDGSIO
0024666 04 000103 047114 -----

27 # NOTE: IF INITIALIZE CLEAR TO CHIP SELECT FF IS STUCK INACTIVE (HIGH), THEN THE
28 # FF WILL NOT BE RESET BY THE SECOND INITIALIZE AND THE DETECT CHIP SELECT
29 # (DETC) FF WILL NOT BE SET WHEN THE STORE CYCLE IS COMPLETED AFTER THE CLOCK
30 # IS REENABLED. THIS WILL CAUSE THE FANOUT BOARD TIMING ERROR A (FOBTERRA) TO
31 # BE SET IF THIS INITIALIZE CLEAR IS STUCK INACTIVE.

0024667 ----- 33 TEST S(FOBTERRA),OTEST,CSFFER
0024667 04 000104 124267 ----- -001- 34 TBN R11,S(FOBTERRA)
0024670 04 000105 055011 ----- -001- 35 BNC P749
0024671 04 000106 007473 ----- -001- 36 LSR MCHB,R11
0024672 04 000107 071400 ----- -002- 37 GA
0024673 04 000110 031000 024677 0024677 -002- 38 LAL RD,++4,RAD
0024675 04 000112 037000 011162 CDGMM -002- 39 BL INTRPNO3

-002- 41 # FAILTST
-002- 42 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS CSFFER.
-002- 43 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0024677 04 000114 020017 ----- -002- 44 VFD 1,0 2,1 5,0 2,0 6,FAILTST
0024700 04 000115 000001 ----- -002- 45 VFD 16,CSFFER

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 83

TEST 48 SEGMENT 1

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB

W77D

0024701 -001- 01 # TROUBLE PRINTOUT DATA = CONTENTS OF R11 IN ON-LINE PROCESSOR
 -001- 02 P749
 03 # INITIALIZE CLEAR ON CHIP SELECT FF IS STUCK INACTIVE (HIGH)

0024701				06	RTN_TBL	++4
0024701 04	000116	171400	-----	-001- 07	GA	
0024702 04	000117	031000	024706 0024706	-001- 08	LAL	RO,++4,RAO
0024704 04	000121	037000	011162 CD6NM	-001- 09	BL	INTRPN03

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 84

TEST 48 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDG5FB W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 48 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

0024706 04 000123 000200 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTESTSEG

```

11 # THIS SEGMENT VERIFIES THE OPERATION OF THE CIRCUIT WHICH CHECKS THAT CHIP
12 # SELECT TIMING SIGNALS ARE NOT GETTING THRU UNSELECTED FANOUT BOARDS TO THEIR
13 # ASSOCIATED MEMORY PLANES. THE VERIFICATION IS VASTLY SIMPLIFIED BY A SPECIAL
14 # FANOUT-BOARD-MAINTENANCE-TEST STATE (F0BMT) WHICH FORCES ALL OF THE FANOUT
15 # BOARDS TO APPEAR UNSELECTED FOR THE BENEFIT OF THE CHECK CIRCUIT. AS EACH
16 # EQUIPPED FANOUT BOARD IS ACCESSED (WITH F0BMT ACTIVE) IT SHOULD INDICATE AN
17 # UNSELECT ERROR TO THE UNSELECT CHECK CIRCUIT IN THE CONTROLLER.

```

```

-001- 20 # NO3 CODE
-001- 21 # PROCESS 3ACC CODED ROUTINE AT ADDRESS USELTST.
0024707 04 000124 040043 000000 CDGNM -001- 22 VFD 1,0 2,2 7,0 6,NN03CD
0024710 04 000125 000000 024712 0024712 -001- 23 ADDR USELTST

```

```

0024712 25 USELTST
0024712 04 000127 131700 043140 CTSB 26 LAL R12,BASADDR,RA1
0024714 04 000131 040721 ----- 27 L R13,1(RA1) # FIRST MEMORY IN STORE UNDER TEST
0024715 28 CALL F0BNDX # HOW MANY EQUIPPED FANOUT BOARDS?
0024715 04 000132 037020 013166 CDG5FA -001- 29 BSA F0BNDX
0024717 04 000134 003100 ----- 30 R4 # ZERO LOOP INDEX
0024720 04 000135 003521 177777 31 LI R5,ONES # INITIALIZE RESULT REG TO ALL ERRORS
0024722 32 USELOOP
0024722 33 S10M MASCINT
0024722 04 000137 137020 012667 CDG5IO -002- 34 BSA MASIOM
0024724 04 000141 046071 137020 -001- 35 DATA MASCINT # INITIALIZE STORE CONTROLLER
0024725 36 S10M F0BMT
0024725 04 000142 137020 012667 CDG5IO -002- 37 BSA MASIOM
0024727 04 000144 041550 ----- -001- 38 DATA F0BMT # FANOUT BOARD MAINTENANCE TEST
0024730 39 WHLREAD RAD
0024730 04 000145 103561 106260 -001- 40 LI R7,B(1000110010110000) # MAIN MEMORY STATUS
0024732 04 000147 004054 ----- -001- 41 LR R2,R12
0024733 04 000150 004075 ----- -001- 42 LR R3,R13
0024734 04 000151 003140 ----- -001- 43 ZR R6 # NO SPECIAL PARITY
0024735 04 000152 037020 013027 CDG5BS -002- 44 BSA MEMOP
0024737 45 SRI0 SERREAD
0024737 04 000154 137020 012667 CDG5IO -002- 46 BSA MASIOM
0024741 04 000156 047114 ----- -001- 47 DATA SERREAD # READ BACK STORE ERROR REGISTER(SER)
0024742 04 000157 124260 ----- 48 TBN R11,S(F0BTERB) # TIMING ERROR B ?
0024743 04 000160 054002 ----- 0024745 49 BC USELSKP

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 85

TEST 46 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CD6SFB

W77D

```

0024744 04 000161 022524 ----- 01 ZBR R5,R4 # IF NOT, CLEAR ERROR INDICATOR BIT
0024745 02 USELSKP
0024745 04 000162 130400 012754 CD6SIO 03 LL R0,MODSIZE
0024747 04 000164 001720 ----- 04 AR R13,R0 # POINT TO NEXT MEMORY MOD (FANOUT BOARD)
0024750 04 000165 055002 ----- 05 BNC USELJMP # CARRY?
0024751 04 000166 004701 ----- 06 AN R12,1 # IF SO, INCREMENT HIGH ADDRESS BITS
0024752 07 USELJMP
0024752 04 000167 104501 ----- 08 AN R4,1 # INCREMENT LOOP INDEX
0024753 04 000170 020110 ----- 09 CR R4,F0BCNT # WAS THIS THE LAST EQUIPPED FANOUT BOARD?
0024754 04 000171 055746 ----- 11 BNC USELOOP # IF NOT, REPEAT FOR NEXT FANOUT BOARD
0024755 04 000172 007465 ----- 13 LSR MCHB,R5 # PREPARE FOR COMPARE
0024756 14 RTN_TBL **4
0024756 04 000173 071400 ----- -001- 15 GA
0024757 04 000174 031000 024763 -001- 16 LAL R0,**4,RAD
0024761 04 000176 037000 011162 CD6NM -001- 17 BL INTRPN03

-001- 19 # COMPARE
-001- 20 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 21 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0024763 04 000200 050014 ----- CD6NM -001- 22 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCMPARE
0024764 04 000201 000000 177777 -001- 23 ADDR 0(0177777)

-001- 25 # FAILBIT
-001- 26 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS USELFBX
-001- 27 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0024766 04 000203 020020 ----- CD6NM -001- 28 VFD 1,0 2,1 5,0 2, 6,NFLBITS
0024767 04 000204 000002 ----- -001- 29 VFD 16,USELFB

```

31 # ONE OF THE EQUIPPED FANOUT BOARDS IS NOT REGISTERING AN UNSELECT ERROR AT THE
32 # CHECK CIRCUITRY AS IT IS SUPPOSED TO WHILE IN THE MAINTENANCE TEST STATE

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CD6SFB ISSUE 05 PAGE 86

TEST 48 SEGMENT 2

23:35:52 2/05/81 ****

MAIN_STORE_FANOUT_BOARD DIAGNOSTIC TEST

CDGSFB W77D

```

-001- 01 # NO3_CODE
-001- 02 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0024770 04 000205 040043 000000 CD6NM -001- 03 VFD 1,0 2,2 7,0 6,NN03CD
0024771 04 000206 000000 024773 0024773 -001- 04 ADDR **2

```

```

-001- 08 CSTFB8 OM 0(210),0(212) # 12705
-001- 09 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000210 *****

```

```

0024773
0024773 04 000210 137020 012771 CD6SIO -002- 12 FINALE FB8INIT
0024775 04 000212 137000 024606 0024606 -002- 13 BSA FINAL
0024777 04 000214 171400 ----- -001- 14 BL BK0STFB8
0025000 04 000215 037000 011725 CD6NM -001- 15 GA
0025000 -001- 16 BL PASSTST # TEST COMPLETED
-001- 17 EOW # 12705
-001- 18 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000216 *****

```

```

-001- 21 CPATCH7 BGNP 0(307) # 800135
-001- 22 NOTE CPATCH7 'CSECT'
-001- 23 NOTE ***** PATCH AREA BEGINS AT 000307 *****

```

```

0121545
0121545 11 000307 114335 ----- 26 P_0607
0121546 11 000310 055004 ----- 0121552 27 TZ R13
0121547 11 000311 006205 ----- 28 BMC INITHSK
0121550 11 000312 037000 024214 0000222 29 R8,R5
0121552 30 BL FBTHMSTKO
0121552 31 INITHSK
0121552 11 000314 103401 177777 32 LI RD,0(177777)
0121554 11 000316 037000 024127 0000135 33 BL FBTHMSKO
0121554 34 ENDP # 800135
-001- 35 NOTE ***** LAST PATCH ADDRESS USED IS 000317 *****
-001- 36 NOTE ***** NUMBER OF PATCH WORDS USED IS 9 (DECIMAL) *****

```

```

39 CSTFB5 MAXSIZE 0,472
40 CSTFB6 MAXSIZE 0,500
41 CSTFB7 MAXSIZE 0,571
42 CSTFB8 MAXSIZE 0,217

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 87

PATCH HISTORY

23:35:52 2/05/81 ****

LISTING OF INDIVIDUAL PATCHES

CDGSFB W77D

0121554 */*/*/012705/*/*/*/

-002- 01 PBEGIN PROG=CDGSFB
 02 # THIS PATCH CORRECTS THE FOLLOWING PROBLEMS:
 03 # 1. INCORRECT STORE NUMBER IN FAIL MESSAGE
 04 # WHEN MORE THAN STORE 0 DEFINED
 05 # 2. TESTS WOULD NOT DIAGNOSE ANY STORE
 06 # HIGHER THAN STORE 1
 07 TCEND
 -001- 08 NOTE *****

0121554 */*/*/012989/*/*/*/

-002- 15 PBEGIN PROG=CDGSFB
 16 # BREAK TEST 45 46 AND 47 INTO SHORTER BLOCKS.
 17 TCEND
 -001- 18 NOTE *****

TRNO=12705 SERNOB=47314

TRNO=12989 SERNOB=50260

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 88

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

LISTING OF INDIVIDUAL PATCHES

CDGSFB

W770

-001- 03 #B TBL 4501
 -001- 04 #B TEST 45
 -001- 05 #B SEGMENT 0, 1 OR 2
 -001- 06 #B PR CDGSFB
 -001- 07 #
 08 # TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
 09 # TO COMPLETE PROPERLY.
 10 # DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
 11 # ADDRESS = FAILURE EXIT(FAILTST) IN 'MASION' SUBROUTINE
 12 #
 13 # MASCM 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
 14 # MASCM 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
 15 # MASCM 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE
 0121554
 -001- 18 #B TBL 4502
 -001- 19 #B TEST 45
 -001- 20 #B SEGMENT 1 OR 2
 -001- 21 #B PR CDGSFB
 -001- 22 #
 23 # FANOUT BOARD 0 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
 24 #
 25 # MASCM 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 0
 26 # MASCM 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
 27 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
 28 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
 29 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
 30 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 31 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 32 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 33 # NOTE--3 DMA 02-17 FC392 DMA MY STORE CONTROL
 34 # NOTE--3 DMA 02-04 FB6 FUSE BOARD-STORE CONTROL
 35 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
 36 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 37 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PLBPH
 38 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 39 #
 0121554
 0121554
 0121554
 40 #
 41 # OPTION A
 42 #
 43 # MASCM 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
 44 # MASCM 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
 45 # MASCM 03-04 JL16 MAIN STORE PLANE - MOD 0 BITS 0 & 8
 46 # MASCM 03-05 JL16 MAIN STORE PLANE - MOD 0 BITS 1 & 9
 47 # MASCM 03-06 JL16 MAIN STORE PLANE - MOD 0 BITS 2 & 10
 48 # MASCM 03-07 JL16 MAIN STORE PLANE - MOD 0 BITS 3 & 11
 49 # MASCM 03-08 JL16 MAIN STORE PLANE - MOD 0 BITS 4 & 12

STORE FANOUT BOARDS TEST-PART B

PR-1c926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 89

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4502 PARF0B00

CDGSFB

W77D

01 # MASCH 03-09 JL16 MAIN STORE PLANE - MOD 0 BITS 5 & 13
 02 # MASCH 03-10 JL16 MAIN STORE PLANE - MOD 0 BITS 6 & 14
 03 # MASCH 03-11 JL16 MAIN STORE PLANE - MOD 0 BITS 7 & 15
 04 # MASCH 03-17 JL16 MAIN STORE PLANE - MOD 0 BITS PL & PH
 05 # MASCH 03-31 JL16 MAIN STORE PLANE - MOD 1 BITS 0 & 8
 06 # MASCH 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
 07 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
 08 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
 09 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 10 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 11 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 12 # NOTE--3 DMA 02-17 FC392 DMA MY STORE CONTROL
 13 # NOTE--3 DMA 02-04 FB6 FUSE BOARD-STORE CONTROL
 14 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
 15 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 16 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
 17 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 18
 19

0121554
0121554

-001- 22 # TBL 4503
 -001- 23 # TEST 45
 -001- 24 # SEGMENT 1 OR 2
 -001- 25 # PR CDGSFB
 -001- 26 #

0121554

27 # FANOUT BOARD 1 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
 28
 29 # MASCH 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 1
 30 # MASCH 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
 31 # MASCH 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
 32 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 33 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
 34 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
 35 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 36 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 37 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 38 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 39 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 40
 41
 42 # OPTION A
 43

0121554
0121554
0121554

44 # MASCH 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
 45 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
 46 # MASCH 03-04 JL16 MAIN STORE PLANE - MOD 0 BITS 0 & 8
 47 # MASCH 03-05 JL16 MAIN STORE PLANE - MOD 0 BITS 1 & 9
 48 # MASCH 03-06 JL16 MAIN STORE PLANE - MOD 0 BITS 2 & 10
 49 # MASCH 03-07 JL16 MAIN STORE PLANE - MOD 0 BITS 3 & 11

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 90

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4503 PARF0B01

CDGSFB W770

0121554
0121554

01 #	MASCH 03-08	JL16	MAIN STORE PLANE - MOD 0 BITS 4 & 12
02 #	MASCH 03-09	JL16	MAIN STORE PLANE - MOD 0 BITS 5 & 13
03 #	MASCH 03-10	JL16	MAIN STORE PLANE - MOD 0 BITS 6 & 14
04 #	MASCH 03-11	JL16	MAIN STORE PLANE - MOD 0 BITS 7 & 15
05 #	MASCH 03-17	JL16	MAIN STORE PLANE - MOD 0 BITS PL & PH
06 #	MASCH 08-19	FA1066	MAIN STORE CONTROLLER - CHECK CIRCUIT B
07 #	MASCH 08-02	FA1060	MAIN STORE CONTROLLER - BITS 0 & 8
08 #	MASCH 08-09	FA1060	MAIN STORE CONTROLLER - BITS 7 & 15
09 #	MASCH 08-03	FA1060	MAIN STORE CONTROLLER - BITS 1 & 9
10 #	MASCH 08-05	FA1060	MAIN STORE CONTROLLER - BITS 3 & 11
11 #	MASCH 08-06	FA1060	MAIN STORE CONTROLLER - BITS 4 & 12
12 #	MASCH 08-07	FA1060	MAIN STORE CONTROLLER - BITS 5 & 13
13 #	MASCH 08-17	FA1062	MAIN STORE CONTROLLER - CHECK CIRCUIT A
14 #	MASCH 08-21	FA1065	MAIN STORE CONTROLLER - COMMAND DECODER
15 #	MASCH 08-18	FA1071	MAIN STORE CONTROLLER - TIMING GENERATOR
16			
17			

-001- 20 #8 TBL 4504
 -001- 21 #8 TEST 45
 -001- 22 #8 SEGMENT 1 OR 2
 -001- 23 #8 PR CDGSFB
 -001- 24 #

0121554

25 # FANOUT BOARD 2 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
 26
 27 # MASMA 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 2
 28 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
 29
 30
 31 # OPTION A
 32
 33 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
 34 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
 35
 36

0121554
0121554

0121554

0121554
0121554

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 91

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4505 PARF0B03

CDGSFB W77D

```

-001- 01 #% TBL 4505
-001- 02 #% TEST 45
-001- 03 #% SEGMENT 1 OR 2
-001- 04 #% PR CDGSFB
-001- 05 #
06 # FANOUT BOARD 3 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
07
0121554 08 # MASHA 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 3
09 # MASHC 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
0121554 10
0121554 11
12 # OPTION A
13
0121554 14 # MASHC 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
15 # MASHC 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
0121554 16
0121554 17

-001- 20 #% TBL 4506
-001- 21 #% TEST 45
-001- 22 #% SEGMENT 1 OR 2
-001- 23 #% PR CDGSFB
-001- 24 #
25 # FANOUT BOARD 4 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
26
0121554 27 # MASHB 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 4
28 # MASHC 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
29 # MASHC 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
0121554 30 # MASHC 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
0121554 31
32
33 # OPTION A
34
0121554 35 # MASHC 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
36 # MASHC 03-29 JL16 MAIN STORE PLANE - MOD 1 BITS 1 & 9
37 # MASHC 03-28 JL16 MAIN STORE PLANE - MOD 1 BITS 2 & 10
38 # MASHC 03-27 JL16 MAIN STORE PLANE - MOD 1 BITS 3 & 11
39 # MASHC 03-26 JL16 MAIN STORE PLANE - MOD 1 BITS 4 & 12
40 # MASHC 03-25 JL16 MAIN STORE PLANE - MOD 1 BITS 5 & 13
41 # MASHC 03-24 JL16 MAIN STORE PLANE - MOD 1 BITS 6 & 14
42 # MASHC 03-23 JL16 MAIN STORE PLANE - MOD 1 BITS 7 & 15
43 # NOTE--1 MASHC 03-18 JL16 MAIN STORE PLANE - MOD 1 BITS PL & PH
44 # MASHC 03-31 JL16 MAIN STORE PLANE - MOD 1 BITS 0 & 8
45 # MASHC 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
46 # MASHC 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
0121554 47 # MASHC 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
0121554 48
0121554 49

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 92

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4506 PARF0B04

CDGSFB

W77D

```

-001- 03 #8 TBL 4507
-001- 04 #8 TEST 45
-001- 05 #8 SEGMENT 1 OR 2
-001- 06 #8 PR CDGSFB
-001- 07 #
08 # FANOUT BOARD 5 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
0121554 09
10 # MASM8 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 5
11 # MASM8 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
0121554 12
0121554 13
14 # OPTION A
0121554 15
16 # MASM8 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
17 # MASM8 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
0121554 18
0121554 19

-001- 22 #8 TBL 4508
-001- 23 #8 TEST 45
-001- 24 #8 SEGMENT 1 OR 2
-001- 25 #8 PR CDGSFB
-001- 26 #
27 # FANOUT BOARD 6 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
0121554 28
29 # MASM8 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 6
30 # MASM8 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
0121554 31
0121554 32
33 # OPTION A
0121554 34
35 # MASM8 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
36 # MASM8 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
0121554 37
0121554 38

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 93

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4509 PARF0B07

CDGSFB W770

0121554 -001- 01 #8 TBL 4509
 0121554 -001- 02 #8 TEST 45
 0121554 -001- 03 #8 SEGMENT 1 OR 2
 0121554 -001- 04 #8 PR CDGSFB
 0121554 -001- 05 #
 06 # FANOUT BOARD 7 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
 07
 08 # MASM 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 7
 09
 10
 11 # OPTION A
 12
 13 # MASM 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
 14
 0121554 15

 -001- 18 #8 TBL 4601
 -001- 19 #8 TEST 46
 -001- 20 #8 SEGMENT 0, 1 OR 2
 -001- 21 #8 PR CDGSFB
 -001- 22 #
 23 # TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
 24 # TO COMPLETE PROPERLY.
 25 # DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
 26 # ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
 27
 0121554 28 # MASM 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
 29 # MASM 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
 30 # MASM 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 94

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4602 PARF0B00

CDGSFB W770

```

-001- 01 #8 TBL 4602
-001- 02 #8 TEST 46
-001- 03 #8 SEGMENT 1 OR 2
-001- 04 #8 PR CDGSFB
-001- 05 #
06 # FANOUT BOARD 0 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
07
0121554 08 #      MASCM 03-02 JK3   MAIN STORE FANOUT BOARD FOR MODULE 0
09 #      MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
10 #      MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
11 #      MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
12
0121554 13
0121554 14 # OPTION A
15
0121554 16 #      MASCM 03-02 JK25   MAIN MEMORY FANOUT BOARD FOR MODULE 0
17 #      MASCM 03-04 JL16   MAIN STORE PLANE - MOD 0 BITS 0 & 8
18 #      MASCM 03-05 JL16   MAIN STORE PLANE - MOD 0 BITS 1 & 9
19 #      MASCM 03-06 JL16   MAIN STORE PLANE - MOD 0 BITS 2 & 10
20 #      MASCM 03-07 JL16   MAIN STORE PLANE - MOD 0 BITS 3 & 11
21 #      MASCM 03-08 JL16   MAIN STORE PLANE - MOD 0 BITS 4 & 12
22 #      MASCM 03-09 JL16   MAIN STORE PLANE - MOD 0 BITS 5 & 13
23 #      MASCM 03-10 JL16   MAIN STORE PLANE - MOD 0 BITS 6 & 14
24 #      MASCM 03-11 JL16   MAIN STORE PLANE - MOD 0 BITS 7 & 15
25 #      MASCM 03-17 JL16   MAIN STORE PLANE - MOD 0 BITS PL & PH
26 #      MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
27 #      MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
28 #      MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
29
0121554 30
0121554

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 95

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4603 PARF0B01

CDGSFB

W77D

```

-001- 01 # TBL 4603
-001- 02 # TEST 46
-001- 03 # SEGMENT 1 OR 2
-001- 04 # PR CDGSFB
-001- 05 #
06 # FANOUT BOARD 1 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
07
08 #      MASCH 03-33 JK3      MAIN STORE FANOUT BOARD FOR MODULE 1
09
10
11 # OPTION A
12
13 #      MASCH 03-02 JK25      MAIN MEMORY FANOUT BOARD FOR MODULE 0
14
15
0121554
0121554
0121554
0121554
0121554
0121554

-001- 18 # TBL 4604
-001- 19 # TEST 46
-001- 20 # SEGMENT 1 OR 2
-001- 21 # PR CDGSFB
-001- 22 #
23 # FANOUT BOARD 2 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
24
25 #      MASHA 03-02 JK3      MAIN STORE FANOUT BOARD FOR MODULE 2
26
27
28 # OPTION A
29
30 #      MASCH 03-02 JK25      MAIN MEMORY FANOUT BOARD FOR MODULE 0
31
32
0121554
0121554
0121554
0121554
0121554
0121554

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 96

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4605 PARF0B03

CDG5FB

W77D

```

-001- 01 ## TBL 4605
-001- 02 ## TEST 46
-001- 03 ## SEGMENT 1 OR 2
-001- 04 ## PR CDG5FB
-001- 05 #
06 # FANOUT BOARD 3 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
0121554 07
08 # MASHA 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 3
0121554 09
0121554 10
11 # OPTION A
0121554 12
13 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
0121554 14
0121554 15

-001- 18 ## TBL 4606
-001- 19 ## TEST 46
-001- 20 ## SEGMENT 1 OR 2
-001- 21 ## PR CDG5FB
-001- 22 #
23 # FANOUT BOARD 4 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
0121554 24
25 # MASHB 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 4
26 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
0121554 27
0121554 28
29 # OPTION A
0121554 30
31 # MASCH 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
32 # MASCH 03-31 JL16 MAIN STORE PLANE - MOD 1 BITS 0 & 8
33 # MASCH 03-29 JL16 MAIN STORE PLANE - MOD 1 BITS 1 & 9
34 # MASCH 03-28 JL16 MAIN STORE PLANE - MOD 1 BITS 2 & 10
35 # MASCH 03-27 JL16 MAIN STORE PLANE - MOD 1 BITS 3 & 11
36 # MASCH 03-26 JL16 MAIN STORE PLANE - MOD 1 BITS 4 & 12
37 # MASCH 03-25 JL16 MAIN STORE PLANE - MOD 1 BITS 5 & 13
38 # MASCH 03-24 JL16 MAIN STORE PLANE - MOD 1 BITS 6 & 14
39 # MASCH 03-23 JL16 MAIN STORE PLANE - MOD 1 BITS 7 & 15
40 # NOTE--1 MASCH 03-18 JL16 MAIN STORE PLANE - MOD 1 BITS PL & PH
0121554 41 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
0121554 42
43

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 97

4607 PARFOB05

CDGS FB

W77D

```

-001- 01  ## TBL 4607
-001- 02  ## TEST 46
-001- 03  ## SEGMENT 1 OR 2
-001- 04  ## PR CDG5FB
-001- 05  #
06  # FANOUT BOARD 5 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
07
08  #          MASHB 03-33  JK3      MAIN STORE FANOUT BOARD FOR MODULE 5
09
0121554
10
11  # OPTION A
12
0121554
13  #          MASCH 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
14
0121554
15

-001- 18  ## TBL 4608
-001- 19  ## TEST 46
-001- 20  ## SEGMENT 1 OR 2
-001- 21  ## PR CDG5FB
-001- 22  #
23  # FANOUT BOARD 6 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
24
25  #          MASHM 03-02  JK3      MAIN STORE FANOUT BOARD FOR MODULE 6
26
0121554
27
0121554
28  # OPTION A
29
0121554
30  #          MASCH 03-33  JK25     MAIN MEMORY FANOUT BOARD FOR MODULE 1
0121554
31
32

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 98

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4609 PARF0B07

CDGSFB

W77D

```

-001- 01 #B TBL 4609
-001- 02 #B TEST 46
-001- 03 #B SEGMENT 1 OR 2
-001- 04 #B PR CDGSFB
-001- 05 #
06 # FANOUT BOARD 7 HAS A FAULTY ADDRESS PARITY CHECK CIRCUIT
07
08 # MASHC 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 7
09
10
11 # OPTION A
12
13 # MASHC 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
14
15

-001- 18 #B TBL 4701
-001- 19 #B TEST 47
-001- 20 #B SEGMENT 1
-001- 21 #B PR CDGSFB
-001- 22 #
23 # ONE OF THE SELECT TIMING SIGNALS (SELCS OR SELRW) THAT IS GENERATED AT
24 # THE STORE CONTROLLER, TRANSMITTED TO FANOUT BOARD 0 AND RETURNED TO THE
25 # CONTROLLER FOR VERIFICATION HAS PRODUCED AN ERROR INDICATING A FAULT SOMEWHERE
26 # IN THIS COMMUNICATION CHAIN.
27
28 # MASHC 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
29 # MASHC 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
30 # MASHC 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 0
31 # MASHC 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
32 # MASHC 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
33 # PROC 02-21 FA1029 MAIN STORE CONTROL 0
34 # MASHC 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
35 # MASHC 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
36 # MASHC 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE
37
38
39 # OPTION A
40
41 # MASHC 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
42 # MASHC 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
43 # MASHC 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
44 # MASHC 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
45 # MASHC 03-04 JL16 MAIN STORE PLANE - MOD 0 BITS 0 & 8
46 # MASHC 03-05 JL16 MAIN STORE PLANE - MOD 0 BITS 1 & 9
47 # MASHC 03-06 JL16 MAIN STORE PLANE - MOD 0 BITS 2 & 10
48 # MASHC 03-07 JL16 MAIN STORE PLANE - MOD 0 BITS 3 & 11
49 # MASHC 03-08 JL16 MAIN STORE PLANE - MOD 0 BITS 4 & 12

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 99

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4701 THERF000

CDGSFB

W77D

01 # MASCH 03-09 JL16 MAIN STORE PLANE - MOD 0 BITS 5 & 13
 02 # MASCH 03-10 JL16 MAIN STORE PLANE - MOD 0 BITS 6 & 14
 03 # MASCH 03-11 JL16 MAIN STORE PLANE - MOD 0 BITS 7 & 15
 04 # MASCH 03-17 JL16 MAIN STORE PLANE - MOD 0 BITS PL & PH
 05 # MASCH 03-31 JL16 MAIN STORE PLANE - MOD 1 BITS 0 & 8
 06 # MASCH 03-29 JL16 MAIN STORE PLANE - MOD 1 BITS 1 & 9
 07 # MASCH 03-28 JL16 MAIN STORE PLANE - MOD 1 BITS 2 & 10
 08 # MASCH 03-27 JL16 MAIN STORE PLANE - MOD 1 BITS 3 & 11
 09 # MASCH 03-26 JL16 MAIN STORE PLANE - MOD 1 BITS 4 & 12
 10 # MASCH 03-25 JL16 MAIN STORE PLANE - MOD 1 BITS 5 & 13
 11 # MASCH 03-24 JL16 MAIN STORE PLANE - MOD 1 BITS 6 & 14
 12 # MASCH 03-23 JL16 MAIN STORE PLANE - MOD 1 BITS 7 & 15
 13 # NOTE--1 MASCH 03-18 JL16 MAIN STORE PLANE - MOD 1 BITS PL & PH
 14 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 15 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 16 # PROC 02-21 FA1029 MAIN STORE CONTROL 0
 17 # MASCH 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
 18 # MASCH 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
 19 # MASCH 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE
 20
 21

0121554
0121554

-001- 24 #& TBL 4702
 -001- 25 #& TEST 47
 -001- 26 #& SEGMENT 1
 -001- 27 #& PR CDGSFB
 -001- 28 #

29 # ONE OF THE SELECT TIMING SIGNALS (SELCS OR SELRW) THAT IS GENERATED AT
 30 # THE STORE CONTROLLER, TRANSMITTED TO FANOUT BOARD 1 AND RETURNED TO THE
 31 # CONTROLLER FOR VERIFICATION HAS PRODUCED AN ERROR INDICATING A FAULT SOMEWHERE
 32 # IN THIS COMMUNICATION CHAIN.
 33

0121554

34 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 35 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 36 # MASCH 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 1
 37
 38

0121554

0121554

39 # OPTION A

0121554

40
 41 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 42 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 43 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
 44
 45

0121554

0121554

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSFB

ISSUE 05

PAGE 100

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4703 THERFB02

CDG5FB W77D

```

-001- 01 #& TBL 4703
-001- 02 #& TEST 47
-001- 03 #& SEGMENT 1
-001- 04 #& PR CDG5FB
-001- 05 #
06 # ONE OF THE SELECT TIMING SIGNALS (SELCS OR SELRW) THAT IS GENERATED AT
07 # THE STORE CONTROLLER, TRANSMITTED TO FANOUT BOARD 2 AND RETURNED TO THE
08 # CONTROLLER FOR VERIFICATION HAS PRODUCED AN ERROR INDICATING A FAULT SOMEWHERE
09 # IN THIS COMMUNICATION CHAIN.
0121554 10 #
11 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
12 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
0121554 13 # MASMA 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 2
0121554 14 #
15 #
16 # OPTION A
0121554 17 #
18 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
19 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
0121554 20 # MASCM 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
0121554 21 #
0121554 22 #

-001- 25 #& TBL 4704
-001- 26 #& TEST 47
-001- 27 #& SEGMENT 1
-001- 28 #& PR CDG5FB
-001- 29 #
30 # ONE OF THE SELECT TIMING SIGNALS (SELCS OR SELRW) THAT IS GENERATED AT
31 # THE STORE CONTROLLER, TRANSMITTED TO FANOUT BOARD 3 AND RETURNED TO THE
32 # CONTROLLER FOR VERIFICATION HAS PRODUCED AN ERROR INDICATING A FAULT SOMEWHERE
33 # IN THIS COMMUNICATION CHAIN.
0121554 34 #
35 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
36 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
37 # MASMA 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 3
38 # MASMA 03-27 JL2 MAIN STORE PLANE - MOD 3 - BITS 3 B11
0121554 39 #
0121554 40 #
41 # OPTION A
0121554 42 #
43 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
44 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
45 # MASCM 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
0121554 46 #
0121554 47 #

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 101

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4705 TMRFB04

CDGSFB W77D

```

-001- 01 #& TBL 4705
-001- 02 #& TEST 47
-001- 03 #& SEGMENT 1
-001- 04 #& PR CDGSFB
-001- 05 #
06 # ONE OF THE SELECT TIMING SIGNALS (SELCS OR SELRW) THAT IS GENERATED AT
07 # THE STORE CONTROLLER, TRANSMITTED TO FANOUT BOARD 4 AND RETURNED TO THE
08 # CONTROLLER FOR VERIFICATION HAS PRODUCED AN ERROR INDICATING A FAULT SOMEWHERE
09 # IN THIS COMMUNICATION CHAIN.
10 #
11 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
12 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
13 # MASMB 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 4
14 #
15 #
16 # OPTION A
17 #
18 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
19 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
20 # MASCH 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
21 #
22 #

-001- 25 #& TBL 4706
-001- 26 #& TEST 47
-001- 27 #& SEGMENT 1
-001- 28 #& PR CDGSFB
-001- 29 #
30 # ONE OF THE SELECT TIMING SIGNALS (SELCS OR SELRW) THAT IS GENERATED AT
31 # THE STORE CONTROLLER, TRANSMITTED TO FANOUT BOARD 5 AND RETURNED TO THE
32 # CONTROLLER FOR VERIFICATION HAS PRODUCED AN ERROR INDICATING A FAULT SOMEWHERE
33 # IN THIS COMMUNICATION CHAIN.
34 #
35 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
36 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
37 # MASB 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 5
38 #
39 #
40 # OPTION A
41 #
42 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
43 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
44 # MASCH 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
45 #
46 #

```

0121554

0121554

0121554

0121554

0121554

0121554

0121554

0121554

0121554

0121554

0121554

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 102

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4707 THERFBO6

CDGSFB W77D

-001- 01 #8 TBL 4707
 -001- 02 #8 TEST 47
 -001- 03 #8 SEGMENT 1
 -001- 04 #8 PR CDGSFB
 -001- 05 #

06 # ONE OF THE SELECT TIMING SIGNALS (SELCS OR SELRW) THAT IS GENERATED AT
 07 # THE STORE CONTROLLER, TRANSMITTED TO FANOUT BOARD 6 AND RETURNED TO THE
 08 # CONTROLLER FOR VERIFICATION HAS PRODUCED AN ERROR INDICATING A FAULT SOMEWHERE
 09 # IN THIS COMMUNICATION CHAIN.

0121554

10 #
 11 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 12 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 13 # MASCM 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 6
 14 #
 15 #

0121554

0121554

0121554

16 # OPTION A
 17 #
 18 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 19 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 20 # MASCM 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
 21 #
 22 #

0121554

0121554

-001- 25 #8 TBL 4708
 -001- 26 #8 TEST 47
 -001- 27 #8 SEGMENT 1
 -001- 28 #8 PR CDGSFB
 -001- 29 #

30 # ONE OF THE SELECT TIMING SIGNALS (SELCS OR SELRW) THAT IS GENERATED AT
 31 # THE STORE CONTROLLER, TRANSMITTED TO FANOUT BOARD 7 AND RETURNED TO THE
 32 # CONTROLLER FOR VERIFICATION HAS PRODUCED AN ERROR INDICATING A FAULT SOMEWHERE
 33 # IN THIS COMMUNICATION CHAIN.

0121554

34 #
 35 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 36 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 37 # MASCM 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 7
 38 #
 39 #

0121554

0121554

0121554

40 # OPTION A
 41 #
 42 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 43 # MASCM 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 44 # MASCM 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
 45 #
 46 #

0121554

0121554

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 103

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4709 THERUSFB

CDGSFB

W77D

```

-001- 01 #8 TBL 4709
-001- 02 #8 TEST 47
-001- 03 #8 SEGMENT 1
-001- 04 #8 PR CDGSFB
-001- 05 #
06 # FANOUT BOARD TIMING ERROR 'B' (UNSELECT ERROR) IS CONSTANTLY HIGH
07 # INDICATING A FAULT WITH ANY EQUIPPED FANOUT BOARD OR THE TIMING CHECK CIRCUIT.
08 #
09 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
10 # MASCH 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 0
11 # MASCH 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 1
12 # MASMA 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 2
13 # MASMA 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 3
14 # MASMB 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 4
15 # MASMB 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 5
16 # MASMC 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 6
17 # MASMC 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 7
18 # MASCH 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
19 #
20 #
21 # OPTION A
22 #
23 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
24 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
25 # MASCH 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
26 # MASCH 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
27 #
28 #

-001- 31 #8 TBL 4710
-001- 32 #8 TEST 47
-001- 33 #8 SEGMENT 1
-001- 34 #8 PR CDGSFB
-001- 35 #
36 # THE MODULE ENABLE (EN1) WHICH GATES THE CHIP SELECT TIMING SIGNAL. ON
37 # FANOUT BOARD 0 IS STUCK ACTIVE (HIGH).
38 #
39 # MASCH 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 0
40 #
41 #
42 # OPTION A
43 #
44 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
45 #
46 #

```

0121554

0121554
0121554

0121554

0121554
0121554

0121554
0121554

0121554
0121554

0121554
0121554

0121554
0121554

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 104

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4711 TMUSFB01

CDGSFB W77D

```

-001- 01 #8 TBL 4711
-001- 02 #8 TEST 47
-001- 03 #8 SEGMENT 1
-001- 04 #8 PR CDGSFB
-001- 05 #
06 # THE MODULE ENABLE (EN1) WHICH GATES THE CHIP SELECT TIMING SIGNAL ON
07 # FANOUT BOARD 1 IS STUCK ACTIVE (HIGH).
08
09 # MASCM 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 1
10
11
12 # OPTION A
13
14 # MASCM 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
15
16

0121554
0121554
0121554
0121554
0121554
0121554

-001- 19 #8 TBL 4712
-001- 20 #8 TEST 47
-001- 21 #8 SEGMENT 1
-001- 22 #8 PR CDGSFB
-001- 23 #
24 # THE MODULE ENABLE (EN1) WHICH GATES THE CHIP SELECT TIMING SIGNAL ON
25 # FANOUT BOARD 2 IS STUCK ACTIVE (HIGH).
26
27 # MASMA 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 2
28
29
30 # OPTION A
31
32 # MASCM 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
33
34

0121554
0121554
0121554
0121554
0121554
0121554

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 105

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 106

4717 TMUSFB07

CDGS FB

W77D

0121554

0121554

0121554

0121554

0121554

0121554

```
-001- 01 #& TBL 4717
-001- 02 #& TEST 47
-001- 03 #& SEGMENT 1
-001- 04 #& PR CDGSFB
-001- 05 #
```

```
06 # THE MODULE ENABLE (EN1) WHICH GATES THE CHIP SELECT TIMING SIGNAL ON
07 # FANOUT BOARD 7 IS STUCK ACTIVE (HIGH).
```

09 # MASHC 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 7

```

10
11
12 # OPTION A

```

14 # MASCH 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1

```
-001- 19 #& TBL 4718
-001- 20 #& TEST 47
-001- 21 #& SEGMENT 1
-001- 22 #& PR CDGSFB
-001- 23 #
```

24 # AN UNSELECT ERROR IS THE RESULT OF (GRASO AND GCASO) INTERNALLY SHORTED
25 # MASCM 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 0

25 #	MASCH	08-22	FC203	MAIN STORE	CONTROLLER CLOCK & I/O INTERFACE
26 #	MASCH	08-23	FC203	MAIN STORE	CONTROLLER CLOCK & I/O INTERFACE
27 #	MASCH	08-21	FA1065	MAIN STORE	CONTROLLER - COMMAND DECODER

28 # OPTION A

29 #	MASCH 03-02	JK25	MAIN MEMORY FANOUT BOARD FOR MODULE 0
30 #	MASCH 03-02	JK25	MAIN STORE CONTROLLED CLOCK & I/O INTERFACE

30 #	MASCH	08-23	FC203	MAIN STORE CONTROLLER CLOCK & I/O INTER
31 #	MASCH	08-21	FA104E	MAIN STORE CONTROLLER LB = COMMAND DECODER

31
32

0121554

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGS.FR

ISSUE 05

PAGE 108

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4719 TIMRBD1

CDGSFB

W77D

0121554
0121554
0121554

-001- 01 #8 TBL 4719
 -001- 02 #8 TEST 47
 -001- 03 #8 SEGMENT 1
 -001- 04 #8 PR CDGSFB
 -001- 05 #
 06 # AN UNSELECT ERROR OCCURED WITHIN THE GRASO AND GCASO TIMING CHAIN
 07 # MASCH 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 1
 08 # OPTION A
 09 #
 10 #
 11 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE D
 12 #

0121554
0121554
0121554
0121554
0121554

-001- 15 #8 TBL 4720
 -001- 16 #8 TEST 47
 -001- 17 #8 SEGMENT 1
 -001- 18 #8 PR CDGSFB
 -001- 19 #
 20 # AN UNSELECT ERROR HAS OCCURED WITHIN THE GRASO/GCASO TIMING CHAIN
 21 # MASMA 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 2
 22 #
 23 #
 24 # OPTION A
 25 #
 26 #
 27 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE D
 28 #

0121554
0121554
0121554
0121554
0121554

-001- 31 #8 TBL 4721
 -001- 32 #8 TEST 47
 -001- 33 #8 SEGMENT 1
 -001- 34 #8 PR CDGSFB
 -001- 35 #
 36 # AN UNSELECT ERROR HAS OCCURED WITHIN THE GRASO/GCASO TIMING CHAIN
 37 # MASMA 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 3
 38 #
 39 #
 40 # OPTION A
 41 #
 42 #
 43 # MASCH 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE D
 44 #

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 109

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4722 TIMR04

CDGSFB

W77D

0121554
0121554
0121554
0121554

-001- 01 #8 TBL 4722
-001- 02 #8 TEST 47
-001- 03 #8 SEGMENT 1
-001- 04 #8 PR CDGSFB
-001- 05 #
06 # AN UNSELECT ERROR HAS OCCURED WITHIN THE GRASO/GCASO TIMING CHAIN
07 # HASMB 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 4
08
09
10 # OPTION A
11
12 # HASCM 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
13

0121554
0121554
0121554
0121554

-001- 16 #8 TBL 4723
-001- 17 #8 TEST 47
-001- 18 #8 SEGMENT 1
-001- 19 #8 PR CDGSFB
-001- 20 #
21 # AN UNSELECT ERROR HAS OCCURED WITHIN THE GRASO/GCASO TIMING CHAIN
22 # HASMB 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 5
23
24 # OPTION A
25
26
27 # HASCM 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
28

0121554
0121554
0121554
0121554
0121554
0121554

-001- 31 #8 TBL 4724
-001- 32 #8 TEST 47
-001- 33 #8 SEGMENT 1
-001- 34 #8 PR CDGSFB
-001- 35 #
36 # AN UNSELECT ERROR HAS OCCURED WITHIN THE GRASO/GCASO TIMING CHAIN
37 # HASMC 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 6
38
39
40 # OPTION A
41
42
43 # HASCM 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
44
45

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 110

TROUBLE LOCATION MANUAL

4725 TIMR07

B08

23:35:52 2/05/81 ****

CDGSFB W77D

-001- 01 #% TBL 4725
 -001- 02 #% TEST 47
 -001- 03 #% SEGMENT 2
 -001- 04 #% PR CDGSFB
 -001- 05 #

06 # AN UNSELECT ERROR HAS OCCURED WITHIN THE GRASO/GCASO TIMING CHAIN
 07 # MASMC 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 7
 08 # OPTION A
 09 # MASMC 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1

-001- 12 #% TBL 4726
 -001- 13 #% TEST 47
 -001- 14 #% SEGMENT 2
 -001- 15 #% PR CDGSFB
 -001- 16 #

17 # AN ENABLE ON THE TIMING SIGNAL CHECK CIRCUITRY IS FAULTY. THIS INCLUDES
 18 # THE ERROR STROBE (ERSTB) ON THE READ/WRITE DETECT FF (RW), THE DETECT-CHIP-
 19 # SELECT SIGNAL WHICH ENABLES THE OUTPUT OF THE SAME FF, OR THE COMMON CLEAR
 20 # ON THE DETECT-CHIP-SELECT FF (DETC5).

0121554

21 #
 22 # MASMC 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 23 # MASMC 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR

-001- 26 #% TBL 4801
 -001- 27 #% TEST 48
 -001- 28 #% SEGMENT 1
 -001- 29 #% PR CDGSFB
 -001- 30 #

0121554

31 # INITIALIZE CLEAR ON CHIP SELECT FF IS STUCK INACTIVE (HIGH).
 32 #
 33 # MASMC 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
 34 # MASMC 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
 35 # MASMC 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
 36 # MASMC 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 111

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4802 USELFB00

CDG5FB W77D

```

-001- 01 ## TBL 4802
-001- 02 ## TEST 48
-001- 03 ## SEGMENT 2
-001- 04 ## PR CDG5FB
-001- 05 ##
06 # WHEN PUT IN THE MAINTENANCE TEST STATE, FANOUT BOARD 0 DID NOT REGISTER
07 # THE EXPECTED UNSELECT ERROR WITH THE CHECK CIRCUITRY IN THE STORE CONTROLLER.
08 # THE 'A' BUS TAKES THE MAINTENANCE STATE TO THE EVEN FANOUT BOARDS.
09 #
0121554 10 # MASC8 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
11 # MASC8 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 0
12 # MASC8 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 2
13 # MASC8 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 4
14 # MASC8 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 6
15 # MASC8 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
16 # MASC8 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
17 # MASC8 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
18 # PROC 02-21 FA1029 MAIN STORE CONTROL 0
19 #
0121554 20 #
0121554 21 # OPTION A
0121554 22 #
0121554 23 # MASC8 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
0121554 24 # MASC8 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
0121554 25 # MASC8 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
0121554 26 # MASC8 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
0121554 27 # MASC8 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
0121554 28 # MASC8 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
0121554 29 # PROC 02-21 FA1029 MAIN STORE CONTROL 0
0121554 30 #
0121554 31 #

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 112

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4803 USELFB01

CDG5FB W77D

```

-001- 01 #3 TBL 4803
-001- 02 #3 TEST 48
-001- 03 #3 SEGMENT 2
-001- 04 #3 PR CDG5FB
-001- 05 #
06 # WHEN PUT IN THE MAINTENANCE TEST STATE, FANOUT BOARD 1 DID NOT REGISTER
07 # THE EXPECTED UNSELECT ERROR WITH THE CHECK CIRCUITRY IN THE STORE CONTROLLER.
08 # THE 'B' BUS TAKES THE MAINTENANCE STATE TO THE ODD FANOUT BOARDS.
09
0121554 10 # MASHC 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
11 # MASHC 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 1
12 # MASHA 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 3
13 # MASHB 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 5
14 # MASHC 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 7
15 # MASHC 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
16
0121554 17
0121554 18 # OPTION A
0121554 19
20 # MASHC 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
21 # MASHC 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
22 # MASHC 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
23 # MASHC 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
24
0121554 25
26

-001- 28 #3 TBL 4804
-001- 29 #3 TEST 48
-001- 30 #3 SEGMENT 2
-001- 31 #3 PR CDG5FB
-001- 32 #
33 # WHEN PUT IN THE MAINTENANCE TEST STATE, FANOUT BOARD 2 DID NOT REGISTER
34 # THE EXPECTED UNSELECT ERROR WITH THE CHECK CIRCUITRY IN THE STORE CONTROLLER.
35
0121554 36 # MASHA 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 2
37
0121554 38
0121554 39 # OPTION A
40
41 # MASHC 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
42
0121554 43
0121554 44

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 113

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4805 USELFB03

CDGSFB W77D

-001- 01 #8 TBL 4805
 -001- 02 #8 TEST 48
 -001- 03 #8 SEGMENT 2
 -001- 04 #8 PR CDGSFB
 -001- 05 #
 06 # WHEN PUT IN THE MAINTENANCE TEST STATE, FANOUT BOARD 3 DID NOT REGISTER.
 07 # THE EXPECTED UNSELECT ERROR WITH THE CHECK CIRCUITRY IN THE STORE CONTROLLER.
 08
 09 # MASMA 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 3
 10
 11
 12 # OPTION A
 13
 14 # MASCM 03-02 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 0
 15
 16
 0121554
 0121554
 0121554
 0121554
 0121554
 0121554
 0121554
 -001- 19 #8 TBL 4806
 -001- 20 #8 TEST 48
 -001- 21 #8 SEGMENT 2
 -001- 22 #8 PR CDGSFB
 -001- 23 #
 24 # WHEN PUT IN THE MAINTENANCE TEST STATE, FANOUT BOARD 4 DID NOT REGISTER
 25 # THE EXPECTED UNSELECT ERROR WITH THE CHECK CIRCUITRY IN THE STORE CONTROLLER.
 26
 27 # MASMB 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 4
 28 # MASCM 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
 29 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 30
 31
 32 # OPTION A
 33
 34 # MASCM 03-33 JK25 MAIN MEMORY FANOUT BOARD FOR MODULE 1
 35 # MASCM 08-19 FA1066 MAIN STORE CONTROLLER - CHECK CIRCUIT B
 36 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 37
 38
 0121554
 0121554
 0121554
 0121554
 0121554
 0121554

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 114

4807 USELFB05

CDGS FB

W77D

-001- 01 N8 TBL 4807
-001- 02 N8 TEST 48
-001- 03 N8 SEGMENT 2
-001- 04 N8 PR CDGSFB
-001- 05 N

06 # WHEN PUT IN THE MAINTENANCE TEST STATE, FANOUT BOARD 5 DID NOT REGISTER
07 # THE EXPECTED UNSELECT ERROR WITH THE CHECK CIRCUITRY IN THE STORE CONTROLLER.
08

0121554

09 # MASMB 03-33 JK3 MAIN STORE FANOUT BOARD FOR MODULE 5

0121554

10

0121554

11

0121554

```

12 # OPTION A
13
14 #      MASCH 03-33  JK25      MAIN MEMORY FANOUT BOARD FOR MODULE 1

```

0121254

15

-001- 19 #& TBL 4808
-001- 20 #& TEST 48
-001- 21 #& SEGMENT 2
-001- 22 #& PR CDGSFB
-001- 23 #

23 # WHEN PUT IN THE MAINTENANCE TEST STATE, FANOUT BOARD 6 DID NOT REGISTER
24 # THE EXPECTED UNSELECT ERROR WITH THE CHECK CIRCUITRY IN THE STORE CONTROLLER.

0121554

27 # MASHC 03-02 JK3 MAIN STORE FANOUT BOARD FOR MODULE 6

0121554

28

0121554

29

0121554

```

30 # OPTION A
31
32 #          MASCH 03-33  JK25      MAIN MEMORY FANOUT BOARD FOR MODULE 1

```

0121254

32

0121554

33

0121554

34

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 115

4809 USELFB07

TRNO=790286 SERNOB=59029

//*/*/790437/*/*/*/*

TRNO=790437 SERNOB=67367

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 116

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

4809 USELFB07

CDGSFB

W77D

//*/790513/*/*/*/

-002- 01

PBEGIN PROG=CDGSFB

TRNO=790513 SERNOB=88142

02 # A CALL TO BASE LEVEL (WAIT INSTRUCTION) IS MADE DURING

03 # AN ARITHMETIC OPERATION AND DESTROYS THE STATE OF THE

04 # CF F/F. THIS CHANGE CORRECTS THE TEST BY MOVING THE WAIT

05 # INSTRUCTION

06 TCEND

-001- 07

NOTE

0121554

0121554

14

END

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 117

CDGSFB W77D

[illegible]

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 118

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
0112434	L	ADDCY	72-32	72-30
0020016	A	ALLZERO	19-04	
'APPLY ERROR				
EQUUS ORDER(O				
/8) TO CHECK				
ER'				
0063476	A	BADCODE	19-06	
'APPLY ERROR				
EQUUS ORDER(O				
/8) TO CHECK				
ER'				
'PAGSCR+30'	T	BADCODET		
'BASADDR	T	BASADDR		
W=4 S=0 N=36 CL=2 28-41, 31-15, 34-43, 37-24, 45-41, 48-18, 51-41, 54-24, 62-45,				
70-47, 74-44, 75-49, 82-40, 85-26				
1-08				
0	U	BBX		
0000000	A	BIT0	17-05	
0000001	A	BIT1	17-06	
0000012	A	BIT10	17-15	
0000013	A	BIT11	17-16	
0000014	A	BIT12	17-17	
0000015	A	BIT13	17-18	
0000016	A	BIT14	17-19	
0000017	A	BIT15	17-20	
0000020	A	BIT16	17-21	
0000021	A	BIT17	17-22	
0000022	A	BIT18	17-23	
0000023	A	BIT19	17-24	
0000002	A	BIT2	17-07	
0000003	A	BIT3	17-08	
0000004	A	BIT4	17-09	
0000005	A	BIT5	17-10	
0000006	A	BIT6	17-11	
0000007	A	BIT7	17-12	
0000010	A	BIT8	17-13	
0000011	A	BIT9	17-14	
06 0022623	L	BKCSSTFB5	26-39	40-07
06 0023315	L	BKCSSTFB6	43-39	57-07
06 0024015	L	BKCSSTFB7	60-39	78-07
06 0024606	L	BKCSSTFB8	80-39	87-14
	2	BLKWSK	8-15	
0047214	A	BUSCHK	19-08	
'CHECK BUS I				
SOLUTION USE I				
N6 SER'	T	BUSCHKT		
06 0024414	L	BYPASS	73-20	
'SER+0'	T	CHDIF	W=1 S=2 N=0 CL=2	
10 R	CHKNDX		8-04	
'CIOBUF+0'	T	CINIT	W=1 S=0 N=0 CL=2	
'CIOBUF+0'	T	CKHLT	W=1 S=2 N=0 CL=2	
'CIOBUF+0'	T	CKSTP	W=1 S=1 N=0 CL=2	

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET C09SFB ISSUE 05 PAGE 119

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
0040374	A	CKTINIT	19-10	63-04, 75-47, 82-44, 83-18
'INITIALIZE ALL STORE CO NTROLLER CIR CUITS'				
0046074	A	CLKSTOP	19-15	71-20, 74-43
'DISABLE STO RE CONTROLLE R CLOCK OUTP UT'				
0046070	A	CLKSTRT	19-17	63-28, 71-32, 83-22
'ENABLE STOR E CONTROLLER CLOCK OUTPU T'				
06 0024446	L	CLK532	75-09	75-16
0177771	A	CLOCKON	23-01	
06 0024521	L	CLP692	76-16	76-21
06 0024646	L	CLP738	83-10	83-15
0043310	A	CLRSER	19-13	
'CLEAR STORE ERROR REGIS TER'				
'SERREAD'	T	CLRSERT		
	T	COMENT		

CDGSFB

W77D

```

+,<(+|8
!$*);
~/
,X>?
:89'=" ab
cdefghi n<(+
+ jklmnopqr-
n)z="stuvv
xyz+(-pwtz
3456789+,-,
-(abcdefghi
)jklmno
pqr \ s
tuvxyz
0123456789

```

T CONLC

LIBNUM=5

'n

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 120

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE T NAME DEF/REF ATTRIBUTES AND REFERENCES

CDGSFB

W770

```

z
te<hplx
vsfgs
~el
1X>k
Jo#b'd" ab
cdefghi n<
+ jklmnopq
r)z~--stuvw
xyz+Lr[>012
3456789+~j]f
-ABCDEF GHI
J KLMNO
PQR
\ S
TUVWXYZ
0123456789

```

```

      T CONSC      LIBNUM=5
CDGSIo V CONTPREP 7-25 26-38, 43-38, 60-38, 80-38
'DGREQL0+0' T CONTROLBITS W=7 S=11 N=0 CL=2
0000011 A COUNT 24-11 LIBNUM=15 41-11, 58-11, 79-11, 89-01, 89-03, 89-18, 90-22, 91-20, 92-01, 92-20, 93-03,
93-22, 94-01, 94-18, 94-18, 95-01, 96-01, 96-18, 97-01, 97-18, 98-01, 98-18, 99-01, 99-18,
99-18, 100-24, 101-01, 101-25, 102-01, 102-25, 103-01, 103-25, 104-01, 104-31, 105-01, 105-19, 106-01,
106-19, 107-01, 107-19, 108-01, 108-19, 109-01, 109-15, 109-31, 110-01, 110-16, 110-31, 111-01, 111-12,
111-24, 111-26, 112-01, 113-01, 113-28, 114-01, 114-19, 115-01, 115-19, 116-01
0111432 L CPATCH 2-16 72-21
0112562 L CPATCH1 2-17
0114107 L CPATCH2 2-18
0115073 L CPATCH3 2-19 29-15, 31-22, 35-19, 37-33, 46-17, 48-27, 52-17, 54-33, 64-08
0121236 L CPATCH7 2-20 87-22
0000001 A CSFFER 111-26 83-45, 111-26
06 0024623 L CSINITCK 82-39 82-33
06 0022600 L CSTFB5 2-08 24-11
06 0023272 L CSTFB6 2-09 41-11
06 0023772 L CSTFB7 2-10 58-11
06 0024563 L CSTFB8 2-11 79-11
'CHKWRD+0' T CTRLCK W=1 S=16 N=0 CL=2
0000000 A DATAW 24-11 41-11, 58-11, 79-11

```

```

t.<(+18
!s*)
~/
,x_>?

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 121

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE T NAME DEF/REF ATTRIBUTES AND REFERENCES

CDGSFB W77D

```

: #B' = "
n < < +
+
W) z = - -
o 1 [ 2 = 0 1 2
3 4 5 6 7 8 9 0 1 2 3 4
- ABCDEFGHI
J K L M N O
P Q R \ S
T U V W X Y Z
0123456789
T DELLC LIBNUM=5
CTSD V DGNLIM 7-12
CTSD V DGREQ 7-37
'SER+0' T DHPER W=1 S=11 N=0 CL=2
'SER+0' T DLPER W=1 S=15 N=0 CL=2
'# NOTE--3 D
MA 02-17
FC392 DMA
MT STORE COW
TROL' T DMAC LIBNUM=12
'# NOTE--3 D
MA 02-04
FB6 FUSE
BOARD-STORE T DMAFUS4 LIBNUM=12
CONTROL' A ERCOLL 19-19
0146074
'COLLECT ERR
ORS IN STORE
ERROR REG' T ERCOLLT
10 R ERSAVE 8-21
06 0024420 L ERSTBCK 74-37 74-35
O J ESS2 1-10
1 J ESS2E 1-09
CYSUB V EXCOFLPG 7-28
0145454 A EXERLD 19-21
'ENABLE EXTE
RNAL LOAD OF
STORE ERROR
REG' T EXERLDT 19-24
0145454 A EXLDB15
'ENABLE EXTE
RNAL LOAD OF
STORE ERROR
REG W/ ERRO
R COLLECT OP
TION' T EXLDB15T
CDGNOF V FAILOFF 3-45
0010000 A FAKD10 22-36 75-12, 75-15, 76-18, 76-20, 83-12, 83-14

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 122

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
0005440	A	FASTREF	19-26	
'PERFORM FAS				
T REFRESH ON				
0045454	A	FASTRNC	19-28	
'FORCE FAST				
REFRESH W/O				
CLOCK'				
0146074	A	FBIT09T	19-32	75-19, 76-27
0146064	A	FBIT09R	19-35	
'COLLECT ERR				
ORS IN SER W				
/ REFRESH ON'T				
'COLLECT ERR				
ORS IN STORE				
ERROR REGIS				
TER'				
06 0023016	L	FBMSK1	32-42	32-44
06 0023131	L	FBMSK2	36-27	36-29
06 0023237	L	FBMSK3	39-05	39-07
06 0023516	L	FBMSK5	50-01	50-03
06 0023631	L	FBMSK6	53-25	53-27
06 0023737	L	FBMSK7	56-05	56-07
06 0022640	L	FBPARCK0	28-36	28-32
06 0022737	L	FBPARCK1	31-10	31-04
06 0023043	L	FBPARCK2	34-38	34-34
06 0023155	L	FBPARCK3	37-19	37-13
06 0023352	L	FBPARCK4	45-36	45-32
06 0023434	L	FBPARCK5	48-13	48-07
06 0023543	L	FBPARCK6	51-36	51-32
06 0023655	L	FBPARCK7	54-19	54-13
06 0022657	L	FBPATL00	29-06	28-49, 29-02
06 0023062	L	FBPATL02	35-08	35-02, 35-04
06 0023351	L	FBPATL04	46-06	45-49, 46-02
06 0023562	L	FBPATL06	52-06	51-49, 52-02
06 0023014	L	FBPATST1	32-38	32-32, 32-34
06 0023235	L	FBPATST3	39-01	38-42, 38-44
06 0023514	L	FBPATST5	49-43	49-37, 49-39
06 0023735	L	FBPATST7	56-01	55-42, 55-44
06 0022715	L	FBPCJP0	30-18	30-16
06 0022777	L	FBPCJP1	32-17	32-15
06 0023124	L	FBPCJP2	36-21	36-19
06 0023220	L	FBPCJP3	38-27	38-25
06 0023412	L	FBPCJP4	47-19	47-17
06 0023477	L	FBPCJP5	49-22	49-20
06 0023624	L	FBPCJP6	53-19	53-17
06 0023720	L	FBPCJP7	55-27	55-25
06 0023263	L	FBPCKAXT	39-43	39-41
06 0022665	L	FBPCLP0	29-38	30-21

CDGSFB

W77D

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB . ISSUE 05 PAGE 123

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77D
06 0022751	L	FBCPLP1	31-45	32-20		
06 0023074	L	FBCPLP2	35-42	36-24		
06 0023172	L	FBCPLP3	38-06	38-30		
06 0023362	L	FBCPLP4	46-40	47-22		
06 0023451	L	FBCPLP5	49-01	49-25		
06 0023574	L	FBCPLP6	52-40	53-22		
06 0023672	L	FBCPLP7	55-06	55-30		
0146076	A	FBRMB15	19-37			
'FANOUT BOARD REFRESH W/ ERROR COLLECT'						
06 0022674	L	FBSNDAD0	30-01	29-44		
06 0023110	L	FBSNDAD2	36-09	36-04		
06 0023376	L	FBSNDAD4	47-07	47-02		
06 0023610	L	FBSNDAD6	53-07	53-02		
06 0024110	L	FBTMBX0	63-42	63-40		
06 0024122	L	FBTMBX0	65-01			
06 0024104	L	FBTMJPO	63-37	63-35		
06 0024054	L	FBTMLPO	63-01	63-44, 64-44		
06 0024124	L	FBTMPRP0	65-03			
06 0024127	L	FBTMSKO	65-10	87-33		
06 0024117	L	FBTMSKP0	64-41	64-35		
06 0024127	L	FBTMSKO	65-11	65-17		
06 0024214	L	FBTMSTKO	68-20	87-30		
06 0024214	L	FBTMSTKO	68-15	68-13		
06 0024243	L	FBTMUSKO	69-20			
06 0024235	L	FBTMUSLO	69-14	69-04, 69-26		
06 0024270	L	FBTMUSL1	70-16	70-14		
'C10BUP+0'	T	FBT09	W=1 S=17 N=0 CL=2			
0020000	A	FBUSRDN	22-38			
06 0022601	L	FBSINIT	25-05			
06 0023273	L	FBBINIT	43-05			
06 0023773	L	FBBINIT	60-05			
06 0024564	L	FBBINIT	80-05			
0046314	A	FCHKBT	19-39			
0046304	A	FCHKBTR	19-41			
'ACTIVATE SHIFTER CHECK BIT W/ REFRESH ENABLED'						
06 0023773	L	FBBINIT	60-05			
06 0024564	L	FBBINIT	80-05			
0046314	A	FCHKBT	19-39			
0046304	A	FCHKBTR	19-41			
'ACTIVATE MAINTENANCE SHIFTER CHECK BIT'						
0040574	A	FCHKOS	19-43			
'FORCE ZEROS TO MODULE SELECT XOR CHECK & WRITE'						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 124

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W770
PROTECT SELE						
CT XOR CHECK						
CIRCUITS'	T	FCHKOST				
0041274	A	FCHK1S	19-46			
'FORCE ONES						
TO MODULE S						
ELECT XOR CH						
ECK & WRITE						
PROTECT SELE						
CT XOR CHECK						
CIRCUITS'	T	FCHK1ST				
D140574	A	FCKOS15	19-49			
'FORCE ZEROS						
TO CHECK CK						
TS W/ ERROR						
COLLECT'	T	FCKOS15T				
D141274	A	FCK1S15	20-02			
'FORCE ONES						
TO CHECK CK						
TS W/ ERROR						
COLLECT'	T	FCK1S15T				
0043074	A	FDISIDLE	20-04			
'FORCE DISAB						
LE OF IDLE F						
LOP'	T	FDISIDLET				
	O	U FFBF				
	O	U FFDf				
	O	U FFEF				
	O	U FFFB				
	O	U FFFD				
	O	U FFFE				
	O	U FFF7				
0000002	A	FFOBRM	22-44			
0145454	A	FFRMB15	19-30			
'FORCE FAST						
REFRESH & BI						
T 15'	T	FFRMB15T				
	O	U FFF7				
0020016	A	FGLDNCFR	23-02			
	I	J FIELD	1-09			
CDGSIO	V	FINAL	7-24	40-06, 57-06, 78-06, 87-13		
0046156	A	FLSHO	20-06	76-24		
0046154	A	FLSHONC	20-09			
'PRESENT ZER						
O TO INPUT O						
F MAIN SHIFT						
ER'	T	FLSHONCT				
'START ZERO						
INTO MAIN SH						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 125

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W770
IFTER'	T	FLSHOT				
004447A	A	FNOTIM	20-16			
0044470	A	FNOTIMC	20-19			
'BLOCK TIMIN						
G TO FANOUT						
BOARDS(W/CLO						
CK)	T	FNOTIMCT				
'INHIBIT TIM						
ING SIGNALS						
TO FANOUT BO						
ARDS'	T	FNOTIMT				
004543A	A	FNOWRT	20-12			
0045430	A	FNOWRTC	20-14			
'FORCE WRITI						
NG OF ONES W						
/ CLOCK RUNN						
ING'	T	FNOWRTCT				
'FORCE WRITI						
NG OF ALL-ON						
ES DATA'	T	FNOWRTT				
10 R FBCNT			8-05	30-20, 32-19, 32-40, 32-43, 32-44, 36-23, 36-25, 36-28, 36-29, 38-29, 39-03, 39-06, 39-07, 47-21, 49-24, 49-45, 50-02, 50-03, 53-21, 53-23, 53-26, 53-27, 55-29, 56-03, 56-06, 56-07, 64-43, 69-18, 69-26, 72-27, 86-09		
0041550	A	F0BMT	20-21	71-28, 85-38		
'FANOUT BOAR						
D MAINTENANC						
E TEST'	T	F0BMTT				
CDGSFA	V	F0BNDX	7-17	28-39, 31-12, 34-41, 37-21, 45-39, 48-15, 51-39, 54-21, 62-42, 69-17, 70-44, 85-29		
'PAGSCR+26'	T	F0BNUM		W=20 S=0 N=52 CL=2 69-33		
'SER+0'	T	F0BPARER		W=1 S=10 N=0 CL=2 30-15, 32-14, 36-18, 38-24, 47-16, 49-19, 53-16, 55-24		
'SER+0'	T	F0BTERA		W=1 S=7 N=0 CL=2 63-34, 72-02, 75-24, 76-35, 83-34		
'SER+0'	T	F0BTERB		W=1 S=0 N=0 CL=2 63-39, 71-39, 85-48		
06 0024040	L	F0BTWCKO	62-40	62-26		
06 0024317	L	F0BUSLP	71-01	72-33		
0000004	A	FOUR	17-25			
0041474	A	FRFSELO	20-23			
'CANCEL SELE						
CT FROM F0B0						
DURING REFR						
ESH'	T	FRFSELOT				
0042334	A	FRFSEL1	20-25			
'CANCEL SELE						
CT FROM F0B1						
DURING REFR						
ESH'	T	FRFSEL1T				
0042534	A	FRFSEL2	20-27			
'CANCEL SELE						
CT FROM F0B2						
DURING REFR						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 126

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77d
ESH' 0043234	T	FRFSEL2T				
'CANCEL SELE	A	FRFSEL3	20-29			
CT FROM FOB3						
DURING REFR						
ESH' 0043434	T	FRFSEL3T				
'CANCEL SELE	A	FRFSELA	20-31			
CT FROM FOB4						
DURING REFR						
ESH' 0044354	T	FRFSEL4T				
'CANCEL SELE	A	FRFSELS	20-33			
CT FROM FOB5						
DURING REFR						
ESH' 0044554	T	FRFSEL5T				
'CANCEL SELE	A	FRFSEL6	20-35			
CT FROM FOB6						
DURING REFR						
ESH' 0045254	T	FRFSEL6T				
'CANCEL SELE	A	FRFSEL7	20-37			
CT FROM FOB7						
DURING REFR						
ESH' 0044334	T	FRFSEL7T				
'SET REFRESH	A	FRREQA	20-39 63-12			
REQUEST ON						
TIMING BOARD						
(FA1071)'	T	FRREQAT				
0040674	A	FRREQB	20-42			
0040664	A	FRREQBR	20-45			
'SET REFRESH						
REQUEST ON						
FA1062 W/ RE						
FRESH ENABLE						
D'	T	FRREQBRT				
'SET REFRESH						
REQ COPY ON						
CHECK BOARD						
A (FA1062)'	T	FRREQBT				
0100000	A	FSDIT09	22-41			
'C10BUP+0'	T	FSEL	W=1 S=16 N=0 CL=2			
0046074	A	FSELA	20-47			
'FORCE STORE						
SELECT (ISOL						
ATE) SIGNAL						
ON FA1071'	T	FSELAT				

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 127

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
0004714	A	FSELB	21-02	
0004710	A	FSELBC	21-05	
'FORCE DUPLI CATED STORE SELECT(SELB) W/ CLOCK' T FSELBCT				
'FORCE DUPLI CATED STORE SELECT(SELB) ACTIVE' T FSELBT				
0046516	A	FSTFBRM	21-07	
'FORCE CONTR OLLER & FANO UT BOARDS TO REFRESH' T FSTFBRMT				
0042354	A	FSTNM	21-09	
0052354	A	FSTNMFR	21-11	
'FORCE NORMA L MODE IN CO NTROLLER & R EFRESH TO FA NOUT BOARDS' T FSTNMFR				
0042344	A	FSTNMR	21-13	
'FORCE MODE TO NORMAL W/ REFRESH ENA BLED' T FSTNMRT				
'FORCE MODE FLOP TO NORM AL STATE' T FSTNMT				
0046514	A	FSTRM	21-15	
'FORCE MODE FLOP TO REFR ESH STATE' T FSTRMT				
0046234	A	FTINWP	21-17	
'FORCE IN-WR ITE-PROTECT INHIBIT' T FTINWPT				
'CHKWRD+0'	T	FXORG	W=1 S=17 N=0 CL=2	
0000004	A	HALTCLK	22-46	
1	R	HIPATBAK	8-13	
		HIPATBAKXT	8-14	IS A SYNONYM OF R1XT
'ILLEGAL CON DITIONAL IN THE IF MACRO' T IFERROR1				
'DATA > 0 OR DATA < 0 IS MEANINGLESS , USE DATA -				

CDG5FB

W77D

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDG5FB

ISSUE 05

PAGE 128

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDG5FB	W77D
" 0"	T	IFERROR2				
'TWO CONSTAN						
TS ARE BEING						
COMPARED IN						
IF MACRO1	T	IFERROR3				
'AN ITEM WAS						
COMPARED TO						
SOMETHING 0						
THAT THAN A						
CONSTANT'	T	IFERROR4				
'DESTINATION						
OF AN = STA						
TEMENT IS A						
CONSTANT'	T	IFERROR5				
'ATTEMPTING						
TO SET ITEM						
" TO SOMETHI						
NG OTHER THA						
N A CONSTANT'	T	IFERROR6				
'ITEM MAY ON						
LY USE THE "						
AND " COND						
ITIONAL'S'	T	IFERROR7				
CSYSUB	V	INIT_OCC	7-29			
0000001	A	INITBIT	22-42			
0121552	L	INITMSK	87-31	87-28		
CSYSUB	V	INITOST	7-30			
CSYSUB	V	INSYNC	7-31			
CDGNN	X	INTRPN03	3-42			
'PAGSCR*25'	T	IOADDR				
'I8'	T	IOBRK				
0006220	A	IOGO	21-19			
'ENABLE ON-L						
INE I/O ACCE						
SS TO OFF-LI						
NE STORE'	T	IOGOT				
0000001	A	IOPTTYR	89-03	94-18		
0125252	A	IOSTTA	21-21			
'I/O TEST PA						
TTERRN #1'	T	IOSTAT				
0052525	A	IOST5	21-23			
'I/O TEST PA						
TTERRN #2'	T	IOSTYST				
'CHKHRD+0'	T	ISOBT5				
0067214	A	ISOCHK	21-25			
'ISOLATE FRO						
M FAR STORES						
& VERIFY VT						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 129

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
A SER'	T	ISOCHKT		
0027214	A	ISOCHKU	21-29	
'APPLY ONES				
TO STORE DAT				
A BUS(W/O IS				
OLATE)'	T	ISOCHKUT		
0040000	A	ISOLATE	22-40	
0043454	A	KILL12	21-31	
'CLEAR SHIFT				
ER BIT IN PO				
SITION 12'	T	KILL12T		
'CIOBUF'0'	T	LDFG		
0020000	A	LOADCHK	22-39	
'PAGSCR'	T	LONAM_BASADD		
		R		
'SER'	T	LONAM_CNDIF		
'CIOBUF'	T	LONAM_CINIT		
'CIOBUF'	T	LONAM_CKHLT		
'CIOBUF'	T	LONAM_CKSTP		
'DGREQLO'	T	LONAM_CONTRO		
		LBITS		
'CHKWRD'	T	LONAM_CTRLCK		
'SER'	T	LONAM_DHPER		
'SER'	T	LONAM_DLPER		
'CIOBUF'	T	LONAM_FBTDP		
'PAGSCR'	T	LONAM_FOBNUM		
'SER'	T	LONAM_FOBPAR		
		ER		
'SER'	T	LONAM_FOBTER		
		A		
'SER'	T	LONAM_FOBTER		
		B		
'CIOBUF'	T	LONAM_FSEL		
'CHKWRD'	T	LONAM_FXORG		
'PAGSCR'	T	LONAM_I0ADDR		
'CHKWRD'	T	LONAM_ISOBTS		
'CIOBUF'	T	LONAM_LDFG		
'PAGSCR'	T	LONAM_LOOPSU		
		B		
'SER'	T	LONAM_MODER		
'SER'	T	LONAM_MPXER		
'MASCIOISC'	T	LONAM_MSSCD		
'MASCIOISC'	T	LONAM_MSSC1		
'MASCIOISC'	T	LONAM_MSSC2		
'MASCIOISC'	T	LONAM_MSSC3		
'STRSTAT'	T	LONAM_PASBT		
'STRSTAT'	T	LONAM_PHBK		
'STRSTAT'	T	LONAM_PLBAK		
'SER'	T	LONAM_PWER		

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET C06SFB ISSUE 05 PAGE 130

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W770
'CIOBUF'	T	LONAM_REFST				
'SER'	T	LONAM_RSELER				
'RSLCHK'	T	LONAM_RSELO6				
'RSLCHK'	T	LONAM_RSEL7				
'CHKWRD'	T	LONAM_RSVD0				
'RSLCHK'	T	LONAM_RSVD1				
'RSLCHK'	T	LONAM_SAPHLF				
'RSLCHK'	T	LONAM_SA17LP				
'SER'	T	LONAM_SCHER				
'CHKWRD'	T	LONAM_SOPCK				
'SER'	T	LONAM_SHER				
'STRSTAT'	T	LONAM_SNGBTE				
	R					
'DGREQLO'	T	LONAM_SPARE				
'CIOBUF'	T	LONAM_STORDE				
	R					
'RSLCHK'	T	LONAM_STRSLP				
'SER'	T	LONAM_TBER				
'PAGSCR'	T	LONAM_TIMSAV				
'DGREQLO'	T	LONAM_TSTMUM				
'PAGSCR'	T	LONAM_UPADDR				
'CHKWRD'	T	LONAM_WDISOL				
'MASCIOSC'	T	LONAM_OSSC0				
'MASCIOSC'	T	LONAM_OSSC1				
'MASCIOSC'	T	LONAM_OSSC2				
'MASCIOSC'	T	LONAM_OSSC3				
'STRSTAT'	T	LONAM_OWDSTR				
	O					
'CIOBUF'	T	LONAM_O10TH				
'CHKWRD'	T	LONAM_ZEPCK				
CDGMN	V	LOOPIND	7-09	26-34, 26-35, 26-37, 26-37, 26-39, 26-39, 43-34, 43-35, 43-37, 43-37, 43-39, 43-39, 60-34, 60-35, 60-37, 60-37, 60-39, 60-39, 80-34, 80-35, 80-37, 80-37, 80-39, 80-39		
'PAGSCR+24'	T	LOOPSUB		W=20 S=0 N=30 CL=2		
0000000 A	L	LPINDX	30-33	30-36, 33-15, 33-18, 36-43, 36-46, 39-23, 39-26, 47-34, 47-37, 50-19, 50-22, 53-41, 53-44, 56-23, 56-26, 65-26, 65-29, 65-41, 65-44, 66-10, 66-13, 66-25, 66-28, 66-40, 66-43, 67-10, 67-13, 67-25, 67-28, 67-40, 67-43, 68-33, 68-36, 69-41, 69-44, 70-23, 70-26, 73-06, 73-09, 86-19, 86-22		
	4 R	LSTPAT	8-17			
'#	X	MXAS	26-28	26-28, 43-28, 60-28, 80-28		
	M					
ASCM 08-02						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
O & 8'	T	MASCBS0		LIGNUM=12		
'#	M					
ASCM 08-03						
FA1060 MAIN						
STORE CONTR						

STORE FANOUT BOARDS TEST-PART B

PR-1c926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 131

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77D
OLLER - BITS						
1 & 9'	T	MASCBS1		LIBNUM=12		
'#	M					
ASCM 08-04						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
2 & 10'	T	MASCBS2		LIBNUM=12		
'#	M					
ASCM 08-05						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
3 & 11'	T	MASCBS3		LIBNUM=12		
'#	M					
ASCM 08-06						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
4 & 12'	T	MASCBS4		LIBNUM=12		
'#	M					
ASCM 08-07						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
5 & 13'	T	MASCBS5		LIBNUM=12		
'#	M					
ASCM 08-08						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
6 & 14'	T	MASCBS6		LIBNUM=12		
'#	M					
ASCM 08-09						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
7 & 15'	T	MASCBS7		LIBNUM=12		
'#	M					
ASCM 08-16						
FA1060 MAIN						
STORE CONTR						
OLLER - BITS						
PL&PH'	T	MASCBS8		LIBNUM=12		
'#	M					
ASCM 08-17						
FA1062 MAIN						
STORE CONTR						
OLLER - CHEC						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 132

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	M77D
K CIRCUIT A'	T	MASCCHKA		LIBNUM=12		
#	M					
ASCM 08-19						
FA1046 MAIN						
STORE CONTR						
OLLER - CHEC						
K CIRCUIT B'	T	MASCCHKB		LIBNUM=12		
#	M					
ASCM 08-23						
FC203 MAIN						
STORE CONTR						
OLLER CLOCK						
S I/O INTERF						
ACE'	T	MASCCLK		LIBNUM=12		
#	M					
ASCM 08-21						
FA1045 MAIN						
STORE CONTR						
OLLER - COMH						
AND DECODER'	T	MASCCOND		LIBNUM=12		
0046071	A	MASCINT	21-33	26-41, 29-41, 32-04, 36-01, 38-14, 43-41, 46-48, 49-09, 52-48, 55-14, 60-41, 71-17, 74-40, 80-41, 85-35		
'INITIALIZE						
STORE CONTR						
LLER'	T	MASCINTT				
MASACS	V	MASCIOSC	7-04			
0046076	A	MASCLK	21-37	75-15, 76-18, 83-12		
0046074	A	MASCLKN	21-40	75-12, 76-20, 83-14		
'FAKE SECOND						
HALF OF STO						
RE CLOCK CYC						
LE'	T	MASCLKNT				
'FAKE FIRST						
HALF OF STOR						
E CLOCK CYCL						
E'	T	MASCLKT				
#	M					
ASCM 08-22						
FA1043 MAIN						
STORE CONTR						
OLLER - I/O						
ORDER RECEIV						
ER'	T	MASCHTCA		LIBNUM=12		
#	M					
ASCM 08-20						
FA1044 MAIN						
STORE CONTR						
OLLER - I/O						
ORDER DECODE						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 133

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77D
R#		T MASCMTCB		LIBNUM=12		
#	M					
ASCM 03-18						
FA1071		MAIN				
STORE CONTR						
OLLER - TIM						
ING GENERATO						
R#		T MASCTIM		LIBNUM=12		
CTSD		V MASERCNT	7-35			
#	M					
ASCM 03-02						
JK25		MAIN				
MEMORY FANO						
UT BOARD FOR						
MODULE 0'		T MASFOBA0		LIBNUM=12		
#	M					
ASCM 03-33						
JK25		MAIN				
MEMORY FANO						
UT BOARD FOR						
MODULE 1'		T MASFOBA1		LIBNUM=12		
#	M					
ASCM 03-02						
JK3		MAIN				
STORE FANO						
T BOARD FOR						
MODULE 0'		T MASFOB0		LIBNUM=12		
#	M					
ASCM 03-33						
JK3		MAIN				
STORE FANO						
T BOARD FOR						
MODULE 1'		T MASFOB1		LIBNUM=12		
#	M					
ASMA 03-02						
JK3		MAIN				
STORE FANO						
T BOARD FOR						
MODULE 2'		T MASFOB2		LIBNUM=12		
#	M					
ASMA 03-33						
JK3		MAIN				
STORE FANO						
T BOARD FOR						
MODULE 3'		T MASFOB3		LIBNUM=12		
#	M					
ASMB 03-02						
JK3		MAIN				
STORE FANO						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 134

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77D
T BOARD FOR MODULE 4'						
'#	M	T MASFOB4		LIBNUM=12		
ASMB 03-33						
JK3		MAIN				
STORE FANOU						
T BOARD FOR MODULE 5'						
'#	M	T MASFOB5		LIBNUM=12		
ASMC 03-02						
JK3		MAIN				
STORE FANOU						
T BOARD FOR MODULE 6'						
'#	M	T MASFOB6		LIBNUM=12		
ASMC 03-33						
JK3		MAIN				
STORE FANOU						
T BOARD FOR MODULE 7'						
CDGSIO	X	T MASFOB7 MASIOM	7-19	LIBNUM=12 26-40, 29-40, 30-13, 32-03, 32-12, 35-49, 36-16, 38-13, 38-22, 43-40, 46-47, 47-14, 49-08, 49-17, 52-47, 53-14, 55-13, 55-22, 60-40, 63-03, 63-11, 63-27, 63-32, 71-16, 71-19, 71-27, 71-31, 71-37, 74-39, 74-42, 75-11, 75-16, 75-18, 75-21, 75-46, 76-17, 76-19, 76-23, 76-26, 76-29, 80-40, 82-43, 83-11, 83-13, 83-17, 83-21, 83-24, 85-34, 85-37, 85-46		
MASACS	V	MASONOFF	7-39			
'#	M					
ASCM 03-04						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S 0 & 8'	T	MASPLA000		LIBNUM=12		
'#	M					
ASCM 03-05						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S 1 & 9'	T	MASPLA001		LIBNUM=12		
'#	M					
ASCM 03-06						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S 2 & 10'	T	MASPLA002		LIBNUM=12		
'#	M					
ASCM 03-07						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S 3 & 11'	T	MASPLA003		LIBNUM=12		

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 135

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDG5FB	W77D
'#	M					
ASCM 03-08						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S 4 & 12'	T	MASPLA004		LIBNUM=12		
'#	M					
ASCM 03-09						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S 5 & 13'	T	MASPLA005		LIBNUM=12		
'#	M					
ASCM 03-10						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S 6 & 14'	T	MASPLA006		LIBNUM=12		
'#	M					
ASCM 03-11						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S 7 & 15'	T	MASPLA007		LIBNUM=12		
'#	M					
ASCM 03-17						
JL16		MAIN				
STORE PLANE						
- MOD 0 BIT						
S PL & PH'	T	MASPLA012		LIBNUM=12		
'#	M					
ASCM 03-31						
JL16		MAIN				
STORE PLANE						
- MOD 1 BIT						
S 0 & 8'	T	MASPLA100		LIBNUM=12		
'#	M					
ASCM 03-29						
JL16		MAIN				
STORE PLANE						
- MOD 1 BIT						
S 1 & 9'	T	MASPLA101		LIBNUM=12		
'#	M					
ASCM 03-28						
JL16		MAIN				
STORE PLANE						
- MOD 1 BIT						
S 2 & 10'	T	MASPLA102		LIBNUM=12		
'#	M					

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 136

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE T NAME DEF/REF ATTRIBUTES AND REFERENCES

CDG5FB W770

```

ASCM 03-27
JL16 MAIN
STORE PLANE
- MOD 1 BIT
S 3 & 11' T MASPLA103 LIBNUM=12
'#
ASCM 03-26
JL16 MAIN
STORE PLANE
- MOD 1 BIT
S 4 & 12' T MASPLA104 LIBNUM=12
'#
ASCM 03-25
JL16 MAIN
STORE PLANE
- MOD 1 BIT
S 5 & 13' T MASPLA105 LIBNUM=12
'#
ASCM 03-24
JL16 MAIN
STORE PLANE
- MOD 1 BIT
S 6 & 14' T MASPLA106 LIBNUM=12
'#
ASCM 03-23
JL16 MAIN
STORE PLANE
- MOD 1 BIT
S 7 & 15' T MASPLA107 LIBNUM=12
'# NOTE--1 M
ASCM 03-18
JL16 MAIN
STORE PLANE
- MOD 1 BIT
S PL & PH' T MASPLA112 LIBNUM=12
'#
ASMA 03-27
JL2 MAIN
STORE PLANE
- MOD 3 - B
ITS 3 & 11' T MASPL303 LIBNUM=12
3 R MCHB LIBNUM=14 30-22, 33-03, 36-32, 39-11, 47-23, 50-07, 53-30, 56-11, 65-20, 68-27, 69-35,
70-17, 72-47, 75-26, 76-38, 83-36, 86-13
0000231 A MCHBXF LIBNUM=14 26-20, 43-20, 60-20, 80-20
CDG510 V MDSLMHSK 7-20 29-09, 31-16, 35-12, 37-26, 46-10, 48-20, 52-10, 54-26
14 P MEHADDR 8-25
14 R MEHADDR0 8-23
15 R MEHADDR1 8-24
CDG5BS V MEHOP 7-14 30-11, 32-10, 36-14, 38-20, 47-12, 49-15, 53-12, 55-20, 63-09, 63-30, 71-10, 71-23, 71-34,

```

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 137

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77D
CDGSBS	V	MEMOPI	7-15	75-06, 76-11, 83-06, 85-44		
'SER+0'	T	MNRMDX	8-20			
CDGSIO	V	MODER	7-21	W=1 S=5 N=0 CL=2		
0000000	A	MOD0	17-27	30-06, 32-01, 35-47, 38-11, 46-45, 49-06, 52-45, 55-11, 62-43, 70-45, 86-03		
0000001	A	MOD1	17-28			
0000002	A	MOD2	17-29			
0000003	A	MOD3	17-30			
0000004	A	MOD4	17-31			
0000005	A	MOD5	17-32			
0000006	A	MOD6	17-33			
0000007	A	MOD7	17-34			
'SER+0'	T	MPXER		W=1 S=1 N=0 CL=2		
0000215	A	MSXT		LIBNUM=14 26-20, 43-20, 60-20, 80-20		
0006071	A	MSCITNS	21-35			
'INITIALIZE						
STORE CONTR						
LLER W/O FOR						
CE SELECT	T	MSCITNST				
'MASCIOSC+0'	T	MSSC0		W=20 S=0 N=0 CL=2		
'MASCIOSC+2'	T	MSSC1		W=20 S=0 N=2 CL=2		
'MASCIOSC+4'	T	MSSC2		W=20 S=0 N=4 CL=2		
'MASCIOSC+6'	T	MSSC3		W=20 S=0 N=6 CL=2		
'#	P					
ROC 02-21						
FA1029 MAIN						
STORE CONTR						
OL 0'	T	MSTCONTO		LIBNUM=12		
0106263	A	MTCRD	18-24	62-34		
0106203	A	MTCWR	18-26	62-37		
CDGNM	V	NABT	3-35			
CDGNM	V	NADD OFF	3-26			
CDGNM	V	NADMIC	3-27			
CDGNM	V	NBEGIN	3-32	24-14, 41-14, 58-14, 79-14		
CDGNM	V	NBGN	3-43			
CDGNM	V	NCLRMS	3-37			
CDGNM	V	NCOMPARE	3-30	30-36, 33-18, 36-46, 39-26, 47-37, 50-22, 53-44, 56-26, 65-29, 65-44, 66-13, 66-28, 66-43, 67-13, 67-28, 67-43, 68-36, 69-44, 70-26, 73-09, 86-22		
CDGNM	V	NDISABA	3-11			
CDGNM	V	NDISABB	3-12			
CDGNM	V	NEXECUTE	3-29			
CDGNM	V	NFAILTST	3-20	65-35, 66-04, 66-19, 66-34, 67-04, 67-19, 67-34, 68-04, 70-04, 75-34, 76-44, 83-44		
CDGNM	V	NFLBITS	3-41	30-42, 33-24, 37-04, 39-32, 47-43, 50-28, 54-04, 56-32, 68-42, 70-32, 73-13, 86-28		
CDGNM	V	NFRZ	3-31			
CDGNM	V	NLDMIR	3-28			
CDGNM	V	NLP END	3-33			
CDGNM	V	NMASK	3-22			
CDGNM	V	NMICRO	3-06	26-19, 43-19, 60-19, 80-19		

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 138

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	C06SFB	W770
0106260	A	NMLRD	18-28	62-32		
0106200	A	NMLWR	18-30	62-35		
CDGNN	V	NN03CD	3-38	26-24, 28-31, 31-03, 34-33, 37-12, 39-40, 43-24, 45-31, 48-06, 51-31, 54-12, 56-40, 60-24, 62-25, 68-12, 69-03, 70-13, 74-34, 80-24, 82-32, 85-22, 87-03		
06	0022677	L	NOCARRY	30-05	30-03	
06	0022754	L	NOCARY1	31-49	31-47	
06	0023077	L	NOCARY2	35-46	35-44	
06	0023175	L	NOCARY3	38-10	38-08	
06	0023365	L	NOCARY4	46-44	46-42	
06	0023454	L	NOCARY5	49-05	49-03	
06	0023577	L	NOCARY6	52-44	52-42	
06	0023675	L	NOCARY7	55-10	55-08	
06	0024367	L	NOERR_A	72-18	72-08	
06	0024364	L	NOERR_B	72-01	71-44	
CDGNN	V	NOSTPRES	7-10			
CDGNN	V	NPASSTST	3-23			
CDGNN	V	NPROS	3-18			
CDGNN	V	NRDHICRO	3-36			
CDGNN	V	NRESCLK	3-16			
CDGNN	V	NRETRN	3-07			
CDGNN	V	NRTNBLM	3-49	26-08, 43-08, 60-08, 80-08		
0006074	A	NSELA	20-49			
'RESET STORE						
SELECT (ISOL						
ATE) SIGNAL						
ON FA1071'	T	NSELAT				
CDGNN	V	NSEND	3-24			
CDGNN	V	NSKIP	3-34			
CDGNN	V	NSTOP	3-10			
CDGNN	V	NSTPCLK	3-14			
CDGNN	V	NSTART	3-09			
CDGNN	V	NSTRCLK	3-13			
CDGNN	V	NTESTSEG	3-19	28-08, 34-08, 45-08, 51-08, 62-08, 74-08, 82-08, 85-08		
CDGNN	V	NTGLK	3-15			
CDGNN	V	NTMTEST	3-39			
CDGNN	V	NTTY	3-21	30-30, 33-11, 36-40, 39-19, 47-31, 50-15, 53-38, 56-19		
0000000	A	NUM	23-05	40-14, 57-14, 78-14		
CDGNN	V	NWDTS	4-01			
CDGNN	5	R NITPAT	8-18			
CDGNN	V	NZERO_ER	3-17			
CDGNN	V	NZERPT	3-40			
CDGNN	V	NZRETRN	3-08			
CDGNN	V	NZSENB	3-25	26-13, 43-13, 60-13, 80-13		
0000200	A	OFLNCHK	17-37			
0007760	A	OFLNDONE	17-38			
0000001	A	ONE	17-35			
0177777	A	ONES	17-36	85-31		

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET C06SFB ISSUE 05 PAGE 139

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE T NAME DEF/REF ATTRIBUTES AND REFERENCES

CDGSFB

W77D

```

6.<(AON
  XS*)
-S/
,N_>?
,/#B'L" ab
cdefghi n5(
+ jklmnopqr
n)z=-stuvw
xyz+,(34012
3456789+-34
-ICLEFGHI
JJKLMNO
PQR
\ S
LLLVLZ
0123456789

```

	T	OPTR	
0001313	A	ORG_000001	26-02 43-02, 60-02, 80-02
0000504	A	ORG_000007	29-21
0000532	A	ORG_000014	31-28
0000563	A	ORG_000021	35-25
0000611	A	ORG_000026	37-39
0000672	A	ORG_000033	46-23
0000720	A	ORG_000040	48-33
0000751	A	ORG_000045	52-23
0000777	A	ORG_000052	54-39
0001076	A	ORG_000057	64-14
0001100	A	ORG_000060	64-18
0000502	A	ORG_000063	29-11
0000670	A	ORG_000066	46-13
0001062	A	ORG_000074	63-15
0001074	A	ORG_000121	64-04
0001111	A	ORG_000133	65-06
0000530	A	ORG_000147	31-18
0000716	A	ORG_000155	48-23
0001401	A	ORG_000210	87-09
0001137	A	ORG_000222	68-17
0001151	A	ORG_000243	69-07 69-11
0000561	A	ORG_000272	35-15
0000747	A	ORG_000300	52-13
0001407	A	ORG_000307	87-26
0001167	A	ORG_000311	70-37
0001212	A	ORG_000370	37-29 71-41
0001216	A	ORG_000373	72-05
0001222	A	ORG_000375	72-15
0000775	A	ORG_000376	54-29

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 140

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W770
0000634	A	ORG_000463	40-02			
0001022	A	ORG_000471	57-02			
0001277	A	ORG_000550	76-32			
0001304	A	ORG_000562	78-02			
0001224	A	ORG_000774	72-27			
16	R	OVLOF		W=1 S=0 N=0 CL=1 LIBNUM=14		
0121545	L	P_0607	87-26	65-09		
CTSD	V	PAGSCR	7-36	26-29, 28-41, 31-15, 34-43, 37-24, 43-29, 45-41, 48-18, 51-41, 54-24, 60-29, 62-45, 65-02, 69-33, 70-47, 74-44, 75-49, 80-29, 82-40, 85-26, 90-43, 93-29, 97-05, 99-33, 97-44, 50-29, 54-05, 56-33		
0000002	A	PARFOB	95-01			
0000002	A	PARFOB00	89-18	95-01		
0000003	A	PARFOB01	90-22	96-01		
0000004	A	PARFOB02	91-20	96-18		
0000005	A	PARFOB03	92-01	97-01		
0000006	A	PARFOB04	92-20	97-18		
0000007	A	PARFOB05	93-03	98-01		
0000010	A	PARFOB06	93-22	98-18		
0000011	A	PARFOB07	94-01	99-01		
0000002	A	PARITY	26-10	43-10, 60-10, 80-10		
10	R	PARSLT	8-22			
3	R	PASBT	16-08	W=1 S=6 N=0 CL=1		
CDGNOF	V	PASSOFF	3-44			
CDGNM	V	PASSTST	7-11	40-09, 57-09, 78-09, 87-16		
16	P	PATADDR	8-26			
0	R	PATBAK	8-12			
6	R	PATNDX	8-19			
3	R	PHBAK	16-04	W=1 S=1 N=0 CL=1		
3	R	PLBAK	16-03	W=1 S=0 N=0 CL=1		
'CDGSFB'						
0000020	A	PRHOL0	17-45	35-10, 46-08, 49-14		
0000005	A	PRHOL1	17-46	29-08, 38-19, 52-08		
0000012	A	PRH1L0	17-47	55-19		
0000017	A	PRH1L1	17-48	32-09		
CBW	V	PRTHASER	17-06			
0000002	A	PRWH1L0	17-49			
0000007	A	PRWH1L1	18-01			
0000010	A	PRWH1H0L	18-02			
0000015	A	PRWH1H0L1	18-03			
'SERVO1'						
06	0024554	L P657	77-01	76-37		
06	0024476	L P685	75-38	75-25		
06	0024701	L P749	84-02	83-35		
11	R	RANGE	8-07			
14	P	RAO		LIBNUM=3 8-25, 26-44, 30-25, 33-06, 36-35, 39-14, 43-44, 47-26, 50-10, 53-33, 56-14, 60-44, 65-23, 68-30, 69-38, 70-20, 72-49, 75-28, 76-39, 80-44, 83-38, 84-08, 86-16		
16	P	RA1		LIBNUM=3 8-26, 62-47, 63-07, 85-26, 85-27		
0047410	A	ROAD	21-42			
0047414	A	ROADNC	21-45			
'GATE STORE						

STORE FANOUT BOARDS TEST-PART B

PR-1c926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 141

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
ADDRESS BITS TO STORE DA TA BUS		T ROADNCT		
GATE STORE ADDRESS BUS(SAO-16,PL)	T			
O STORE DATA BUS(SDO-15, PL,PH) W/ CL OCK	T	ROADT		
CI0BUF+0	T	REFST		W=1 S=3 N=0 CL=2
0006070	A	REFSTOP	21-47	
INHIBIT REF RESHING OF S TORE	T	REFSTOPT		
0006060	A	REFSTRT	21-49	
RESUME REGU LAR REFRESHI NG OF STORE	T	REFSTRTT		
0046060	A	RFWISOL	22-02	
RESUME REGU LAR REFRESH W/ STORE ISO LATED	T	RFWISOLT		
CSYSUB	V	RGCHKADR	7-32	
BASE ADDRE SS OF STORE/ MOD UNDER TE ST	T	RMK_BASADDR		
ERROR INDI CATED BY STO RE COMMAND C HECKER	T	RMK_CHDIF		
MAIN STORE CONTROLLER INITIALIZATI ON	T	RMK_CINIT		
CONTROLLER CLOCK HALT	T	RMK_CKHLT		
CONTROLLER CLOCK STEP	T	RMK_CKSTP		
	T	RMK_CONTROLB ITS		
RESULT OF STORE CONTR L LEADS ISOL ATION	T	RMK_CTRLCK		
ERROR IN P ARITY OVER H				

CDG\$FB

W77D

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG\$FB ISSUE 05 PAGE 142

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
IGH DATA BIT				
S'	T	RMK_DHPER		
' ERROR IN P				
ARITY OVER L				
OW DATA BITS'	T	RMK_DLPER		
' FORCE BIT				
15 ACTIVE IN				
MAIN SHIFTE				
R'	T	RMK_FBT09		
' NUMBER OF				
MEMORY MODUL				
ES (OR FANOU				
T BOARDS) IN				
STORE CURRE				
NTLY UNDER T				
EST'	T	RMK_FOBNUM		
' PARITY ERR				
OR DETECTED				
IN ADDRESS R				
EACHING FANO				
UT BOARD(S)'	T	RMK_FOBPARER		
' STORE TIMI				
NG ERROR FRO				
M SELECTED F				
OB'	T	RMK_FOBTERA		
' STORE TIMI				
NG ERROR FRO				
M UNSELECTED				
' FOB'	T	RMK_FOBTERB		
' STORE SELE				
CT FORCE ON				
TIMING BOARD				
A'	T	RMK_FSSEL		
' I/O ORDER				
CHECKER EXCL				
USIVE-OR RES				
ULT'	T	RMK_FXORG		
' I/O SUBCHA				
NNEL ADDRESS				
FOR CURRENT				
STORE CONTR				
OLLER'	T	RMK_IOADDR		
' SDO-6,SD8-				
14 ISOLATE T				
EST RESULTS'	T	RMK_ISOBTS		
' ORDER CHEC				
KER EXCLUSIV				
E-OR LOAD'	T	RMK_LDFG		
' ADDRESS OF				

CDG5FB W77D

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 143

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
SUBSTITUTE				
FOR 'LOOP'	I			
N TTY TROUBL				
E MESSAGE'	T	RMK_LOOPSUB		
' ALL-SEEMS-				
WELL SIGNAL				
NOT RECEIVED				
FROM MODULE				
(FOB) ACCESS				
ED DURING NO				
RMAL CYCLE'	T	RMK_MODER		
' MULTIPLEXO				
R ERROR DETE				
CTED BY CHEC				
K BOARD'	T	RMK_MPXER		
' ADDRESS O				
F MY STORE S				
UBCHANNEL O'	T	RMK_MSSCO		
' ADDRESS OF				
MY STORE SU				
BCHANNEL 1'	T	RMK_MSSC1		
' ADDRESS OF				
MY STORE SU				
BCHANNEL 2'	T	RMK_MSSC2		
' ADDRESS OF				
MY STORE SU				
BCHANNEL 3'	T	RMK_MSSC3		
' REPEAT PAS				
S THRU TEST				
INDICATOR'	T	RMK_PASBT		
' PARITY HIG				
H VALUE REAO				
BACK'	T	RMK_PHBAK		
' PARITY LOW				
VALUE REAO				
BACK'	T	RMK_PLBAK		
' ERROR IN P				
ARITY FOR WI				
DE STORE'	T	RMK_PWER		
' STORE REFR				
ESH STOP'	T	RMK_REFST		
' ALL MEMORY				
MOOULES(FOB				
S) NOT SELEC				
TED DURING R				
EFRESH'	T	RMK_RSELER		
' REFRESH SE				
LECTS FROM F				
ANOUT BOARDS				

CD6SFB

W77D

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CD6SFB ISSUE 05 PAGE 144

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77D
D-6'	T	RMK_RSEL06				
' REFRESH SE						
LECT FROM FA						
NOUT BOARD 7'	T	RMK_RSEL7				
' SD7,SD15 I						
SOLATE TEST						
RESULT - ONL						
Y GATED INTO						
BY LOAD I/O						
DECODER CHE						
CK (LOADCHK)						
OPTION'	T	RMK_RSVD0				
' RESERVED -						
FOBTERRA IS						
SET AFTER IN						
IT'	T	RMK_RSVD1				
' STORE ADDR						
ESS PARITY H						
IGH LOOP RES						
ULT'	T	RMK_SAPHL				
' STORE ADDR						
ESS BIT 17 L						
OOD RESULT'	T	RMK_SA17LP				
' PREMATURE						
STORE COMPLE						
TE (SCH)'	T	RMK_SCHER				
' RESULT OF						
STORE DATA P						
ARITY ISOLAT						
ION'	T	RMK_SDPCK				
' ERROR IN H						
AIN SHIFTER						
OPERATION'	T	RMK_SHER				
' SINGLE BIT						
' ERROR FLAG'	T	RMK_SNGBTERR				
'	T	RMK_SPARE				
' 4/8 MAINTEN						
NANCE STATE						
CODE'	T	RMK_STORDER				
' STORE SELE						
CT ADDRESS B						
ITS LOOP RES						
ULT'	T	RMK_STRSLP				
' ERROR DETE						
CTED ON TIMI						
NG BOARD'	T	RMK_TBER				
' SAVE TIMIN						
G CONSTANT F						
OR TIMEOUT SU						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 145

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDG5FB	W77D
BROUTINE	T	RMK_TMSAV				
DIAGNOSTIC						
TEST NUMBER						
REQUESTED	T	RMK_TSTNUM				
ADDRESS OF						
NEXT BLOCK						
OF MEMORY TO						
BE UPDATED						
AFTER MEMORY						
PATTERN TES						
T	T	RMK_UPADDR				
RESULTS OF						
WIDE DATA(S						
D16-23) ISOL						
ATE	T	RMK_WDISOL				
ADDRESS OF						
OTHER STORE						
SUBCHANNEL						
O	T	RMK_OSSCO				
ADDRESS OF						
OTHER STORE						
SUBCHANNEL						
1	T	RMK_OSSC1				
ADDRESS OF						
OTHER STORE						
SUBCHANNEL						
2	T	RMK_OSSC2				
ADDRESS OF						
OTHER STORE						
SUBCHANNEL						
3	T	RMK_OSSC3				
WIDE STORE						
INDICATOR B						
IT	T	RMK_OWDSTRO				
0-10 BIT T						
IMING SHIFTE						
R FAKE	T	RMK_O10TH				
RESULT OF						
EXTENDED(3 B						
IT) PARITY I						
SOLATE	T	RMK_2EPCK				
0010177	A	RSELBTS	15-22	15-23		
0167600	A	RSELBTSN	15-23			
SER+0	T	RSELER	W=1 S=6 N=0 CL=2			
RSLSCHK+0	T	RSEL06	W=7 S=0 N=0 CL=2	15-22		
RSLSCHK+0	T	RSEL7	W=1 S=14 N=0 CL=2		15-22	
CHKWRD+0	T	RSVDD	W=1 S=7 N=0 CL=2			
RSLSCHK+0	T	RSVD1	W=1 S=7 N=0 CL=2			
0047214	A	RTNADHI	22-04			

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5FB ISSUE 05 PAGE 146

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGFSB	W77D
'LOAD SA17 & SAPH INTO S ER' 'DGSFB' 06 0024476 L RWGATCK O R RO		T RTNADHIT T RTNAME	75-44	LIBNUM#3 8-12, 26-44, 30-25, 33-06, 35-12, 35-13, 35-25, 36-35, 37-26, 37-27, 37-39, 39-14, 43-44, 46-10, 46-11, 46-23, 47-26, 48-20, 48-21, 48-33, 50-10, 52-10, 52-11, 52-24, 53-33, 54-26, 54-27, 54-40, 54-14, 60-14, 62-47, 65-19, 65-23, 68-23, 68-30, 69-19, 69-21, 69-34, 69-38, 70-20, 71-03, 72-42, 72-45, 72-46, 72-49, 75-28, 76-39, 80-44, 83-38, 84-08, 86-03, 86-04, 86-16, 87-32 LIBNUM#3 8-13, 69-15, 69-32, 69-33, 69-34, 69-35 LIBNUM#4 8-14 LIBNUM#3 30-15, 32-14, 36-18, 38-24, 47-16, 49-19, 53-16, 55-24, 63-34, 63-39, 71-39, 72-02, 75-24, 75-26, 76-35, 76-38, 83-34, 83-36, 85-48 LIBNUM#3 8-23, 28-41, 28-48, 30-04, 30-09, 31-15, 31-48, 32-07, 32-31, 34-43, 35-01, 35-45, 36-12, 37-24, 38-09, 38-17, 38-41, 45-41, 45-48, 46-43, 47-10, 48-18, 49-04, 49-12, 49-36, 51-41, 51-48, 52-43, 53-10, 54-24, 55-09, 55-17, 55-41, 62-43, 64-23, 70-45, 72-29, 74-44, 75-02, 75-07, 75-16, 75-49, 76-07, 76-15, 76-21, 82-40, 83-02, 83-09, 83-15, 85-26, 85-41, 86-06 LIBNUM#3 8-24, 29-09, 29-21, 30-02, 30-10, 31-16, 31-28, 31-46, 32-08, 35-11, 35-25, 35-43, 36-13, 37-25, 37-39, 38-07, 38-18, 46-09, 46-23, 46-41, 47-11, 48-19, 48-33, 49-02, 49-13, 52-09, 52-24, 52-41, 53-11, 54-25, 54-40, 55-07, 55-18, 62-44, 63-36, 63-38, 63-41, 63-43, 64-42, 64-43, 65-08, 65-17, 70-46, 71-45, 72-09, 72-19, 72-27, 72-40, 72-43, 74-45, 75-03, 76-01, 76-08, 82-41, 83-03, 85-27, 85-42, 86-04, 87-27 LIBNUM#3 29-23, 30-02, 30-06, 31-30, 31-46, 32-01, 35-27, 35-43, 35-47, 37-41, 38-07, 38-11, 46-25, 46-41, 46-45, 48-35, 49-02, 49-06, 52-26, 52-41, 52-45, 54-42, 55-07, 55-11, 55-35, 55-45, 56-09, 56-10, 74-49, 76-05, 82-49 LIBNUM#3 8-15, 30-09, 32-07, 36-12, 38-17, 47-10, 49-12, 53-10, 55-17, 62-45, 64-40, 70-47, 72-31, 75-02, 76-07, 83-02, 85-41 LIBNUM#3 8-16, 28-46, 28-47, 28-48, 29-01, 30-10, 32-08, 32-29, 32-30, 32-31, 32-33, 32-39, 32-43, 33-01, 34-48, 34-49, 35-01, 35-03, 36-13, 36-26, 36-28, 36-30, 36-31, 38-18, 38-39, 38-40, 38-41, 38-43, 39-02, 39-06, 39-09, 45-46, 45-47, 45-48, 46-01, 47-11, 49-13, 49-34, 49-35, 49-36, 49-38, 49-44, 50-02, 50-05, 51-46, 51-47, 51-48, 52-01, 53-11, 53-24, 53-26, 53-28, 53-29, 55-18, 55-39, 55-40, 55-41, 55-43, 56-02, 56-06, 56-09, 62-46, 64-23, 70-48, 72-29, 75-03, 76-08, 83-03, 85-42 LIBNUM#3 8-17, 26-28, 26-29, 28-40, 30-17, 30-22, 31-14, 32-16, 33-02, 33-03, 34-42, 36-20, 36-31, 36-32, 37-23, 38-26, 39-10, 39-11, 43-28, 43-29, 45-40, 47-18, 47-23, 48-17, 49-21, 50-06, 50-07, 51-40, 53-18, 53-29, 53-30, 54-23, 55-26, 56-10, 56-11, 60-28, 60-29, 62-49, 63-07, 63-44, 64-15, 80-28, 80-29, 85-30, 86-01, 86-08, 86-09 LIBNUM#3 8-18, 28-47, 29-01, 29-07, 29-43, 30-17, 30-19, 30-20, 31-13, 32-16, 32-18, 32-19, 32-30, 32-33, 34-49, 35-03, 35-09, 36-03, 36-20, 36-22, 36-23, 37-22, 38-26, 38-28, 38-29, 38-40, 38-43, 45-47, 46-01, 46-07, 47-01, 47-18, 47-20, 47-21, 48-16, 49-21, 49-23, 49-24, 49-35, 49-38, 51-47, 52-01, 52-07, 53-01, 53-18, 53-20, 53-21, 54-22, 55-26, 55-28, 55-29, 55-40, 55-43, 62-48, 63-36, 63-41, 65-02, 65-19, 65-20, 70-49, 71-45, 72-09, 72-46, 72-47, 85-31, 86-01, 86-13, 87-29 LIBNUM#3 8-19, 29-08, 29-42, 29-45, 32-09, 35-10, 36-02, 36-05, 38-19, 46-08, 46-49,		

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGFSB ISSUE 05 PAGE 147

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77D
7	R	R7		47-03, 49-14, 52-08, 52-49, 53-03, 55-19, 63-06, 71-08, 71-21, 75-04, 76-09, 83-04, 85-43 LIBNUM=3 8-20, 30-08, 32-06, 36-11, 38-16, 47-09, 49-11, 53-09, 55-16, 63-07, 71-02, 74-47, 76-03, 82-47, 85-40 LIBNUM=3 8-21, 8-22, 68-26, 69-15, 70-17, 87-29		
10	R	R8		W=1 S=10 N=0 CL=2		
'RSLCHK+0'	T	SAPHL		W=1 S=11 N=0 CL=2		
'RSLCHK+0'	T	SA17LP		W=1 S=3 N=0 CL=2		
'SER+0'	T	SCMER		W=1 S=14 N=0 CL=2		
'CHKMRB+0'	T	SDPCK				
0001417	A	SERNO_047314	88-02			
0001423	A	SERNO_050260	88-16			
0001520	A	SERNO_059029	116-18			
0001524	A	SERNO_067367	116-29			
0001530	A	SERNO_088142	117-02			
0047114	A	SERREAD	22-09	30-14, 32-13, 36-17, 38-23, 47-15, 49-18, 53-15, 55-23, 63-33, 71-38, 75-22, 76-30, 83-25, 85-47		
'READ BACK S						
TORRE ERROR R						
EGISTER(SER)	T	SERREADT		W=1 S=4 N=0 CL=2		
'SER+0'	T	SHER				
CDGNM	V	SLDMCHBF	3-46			
CDGNM	V	SLDMIRLF	3-47			
CDGNM	V	SMCHF	3-48			
'3	R	SNGBTB	16-07	W=1 S=5 N=0 CL=1		
'DQREGLO+0'	T	SPARE	W=2 S=7 N=0 CL=2			
0044714	A	SPAREA	22-07			
'SPARE I/O O						
RDER	T	SPAREAT				
0106274	A	SPRRD	18-32 62-33			
0106214	A	SPRNR	18-34 62-36			
'MXAS'	T	SPWORD				
06 0024032	L	STCOMTBL	62-31 62-47			
0000002	A	STEPCLK	22-45			
0000055	A	STFB5		LIBNUM=15 23-05		
0000056	A	STFB6		LIBNUM=15 40-14		
0000057	A	STFB7		LIBNUM=15 57-14		
0000060	A	STFB8		LIBNUM=15 78-14		
06 0024306	L	STFOBTST	70-42 70-41			
0000010	A	STOPREF	22-47			
'CIOBUF+0'	T	STORRER		W=10 S=4 N=0 CL=2		
TDATA	V	STRLIM	7-41			
CDGSI0	V	STRSIZE	7-22			
'RSLCHK+0'	T	STRSLP		W=1 S=12 N=0 CL=2		
'3	R	STRSTRT	8-16	16-03, 16-04, 16-06, 16-07, 16-08		
0041634	A	STSBV	22-11			
0041630	A	STSBYCL	22-13			
'SET STORE B						
USY(SBY) W/						
CLOCK'	T	STSBYCLT				
'SET STORE B						

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 148

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	COGSFB	W770
USY(SBY) SIG						
NAL						
CDG610	V	STELMSK	7-23	28-46, 32-29, 34-48, 38-39, 45-46, 49-34, 51-46, 55-39		
0000000	A	SUCCESS	30-33	30-36, 33-15, 33-18, 36-43, 36-46, 39-23, 39-26, 47-34, 47-37, 50-19, 50-22, 53-41, 53-44, 56-23, 56-26, 65-26, 65-29, 65-41, 65-44, 66-10, 66-13, 66-25, 66-28, 66-40, 66-43, 67-10, 67-13, 67-25, 67-28, 67-40, 67-43, 68-33, 68-36, 69-41, 69-44, 70-23, 70-26, 73-06, 73-09, 86-19, 86-22		
0000000	A	SV_REG				
'SER+0'	T	TBER	W=1	S=13 N=0 CL=2		
0000060	A	TESTNO	23-05	40-14, 57-14, 78-14, 89-01, 94-16, 99-16, 111-24		
0116774	L	TFAPCH2	2-22			
0000003	A	THREE	18-05			
0000032	A	TINCKER	111-12	75-35, 76-45, 111-12		
0000025	A	TIMRB03	109-31			
0000023	A	TIMRB01	109-01			
0000024	A	TIMRB02	109-15			
0000022	A	TIMRFB	108-19	73-16		
0000022	A	TIMRFB00	108-19			
0000026	A	TIMR04	110-01			
0000027	A	TIMR05	110-16			
0000030	A	TIMR06	110-31			
0000031	A	TIMR07	111-01			
'PAGSCR+27'	T	TINSAV	W=20	S=0 N=33 CL=2		
0000055	A	TLMFRT	6-01	23-05, 89-01		
0000001	A	TMRFB	99-18	68-43		
0000001	A	TMRFB00	99-18	65-36, 99-18		
0000002	A	TMRFB01	100-24	66-05, 100-24		
0000003	A	TMRFB02	101-01	66-20, 101-01		
0000004	A	TMRFB03	101-25	66-35, 101-25		
0000005	A	TMRFB04	102-01	67-05, 102-01		
0000006	A	TMRFB05	102-25	67-20, 102-25		
0000007	A	TMRFB06	103-01	67-35, 103-01		
0000010	A	TMRFB07	103-25	68-05, 103-25		
0000011	A	TMRUSFB	104-01	70-05, 104-01		
0000012	A	TMRUSFB	104-31	70-33		
0000012	A	TMRUSFB00	104-31			
0000013	A	TMRUSFB01	105-01			
0000014	A	TMRUSFB02	105-19			
0000015	A	TMRUSFB03	106-01			
0000016	A	TMRUSFB04	106-19			
0000017	A	TMRUSFB05	107-01			
0000020	A	TMRUSFB06	107-19			
0000021	A	TMRUSFB07	108-01			
0400000	L	TPATCH	2-24			
0001417	A	TR_012705	88-02			
0001423	A	TR_012989	88-16			
0001401	A	TR_12705	26-02	40-02, 43-02, 57-02, 60-02, 78-02, 80-02, 87-09		
0001076	A	TR_12989	29-11	29-21, 31-18, 31-28, 35-15, 35-25, 37-29, 37-39, 46-13, 46-23, 48-23, 48-33, 52-13, 52-23, 54-29, 54-39, 64-04, 64-14		

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET COGSFB ISSUE 05 PAGE 149

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSFB	W77D
0001520	A	TR_790286	69-07	116-18		
0001524	A	TR_790437	63-15	69-11, 70-37, 71-41, 72-05, 72-15, 72-27, 76-32, 116-29		
0001530	A	TR_790513	64-18	117-02		
0001407	A	TR_800135	65-06	68-17, 87-26		
06 0024773	L	TRORG	26-02	29-11, 31-18, 35-15, 37-29, 40-02, 43-02, 46-13, 48-23, 52-13, 54-29, 57-02, 60-02, 63-15, 64-04, 64-18, 65-06, 68-17, 69-07, 69-11, 70-37, 71-41, 72-05, 72-15, 76-32, 78-02, 80-02, 87-09		
'DGRQLO+0'	T	TSTNUM	W=7	S=0	N=0	CL=2
	U	TTYTBL				
0000002	A	TWO	18-06			
'2'	T	TEXTSEG				
06 0024373	L	UNSELMSK	72-41	72-43		
06 0024372	L	UNSELTST	72-39	72-28		
'PAGSCR+28'	T	UPADDR	W=4	S=0	N=34	CL=2
CSYSUB	V	UPD_OTS	7-33			
0000002	A	USELFB	112-01	86-29		
0000002	A	USELFB00	112-01			
0000003	A	USELFB01	113-01			
0000004	A	USELFB02	113-28			
0000005	A	USELFB03	114-01			
0000006	A	USELFB04	114-19			
0000007	A	USELFB05	115-01			
0000010	A	USELFB06	115-19			
0000011	A	USELFB07	116-01			
06 0024752	L	USELJMP	86-07	86-05		
06 0024722	L	USELLOOP	85-32	86-11		
06 0024745	L	USELSKP	86-02	85-49		
06 0024712	L	USELTST	85-25	85-23		
0007114	A	USERRED	22-15			
'READ STORE						
ERROR REG (W						
/0 ISOLATE)'	T	USERREDT				
CTVTAB	V	WAIT	6-01			
14 P	P	WAITX_XCBLM	29-26, 31-33, 35-30, 37-44, 46-28, 48-38, 52-28, 54-44, 64-22			
CBLM	V	WAIT	7-07			
'CHKWRD+0'	T	WDISOL	W=4	S=10	N=0	CL=2
TDATA	V	WOSTR	7-42			
0010000	A	WPBLKSZE	18-07			
0046061	A	WPCLR	22-17			
'STORE INITI						
ALIZE, INCL						
WRITE PROTE						
CT'	T	WPCLRT				
TDATA	V	WPTBL	7-43			
0000000	A	ZER0	18-08			
0000000	A	ZER1	18-09			
'MASCIO5C+1'	T	OSSC0	W=20	S=0	N=1	CL=2
'MASCIO5C+3'	T	OSSC1	W=20	S=0	N=3	CL=2
'MASCIO5C+5'	T	OSSC2	W=20	S=0	N=5	CL=2

STORE FAOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 150

TROUBLE LOCATION MANUAL

23:35:52 2/05/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
'MASCIOSC+7'	T	OSSC3		W=20 S=0 N=7 CL=2
0000000	A	O TEST	18-10	
	S	ONOSTRO	16-06	W=1 S=4 N=0 CL=1
0052354	A	O10NOR	22-19	
'0-10 TIMING				
(O10TIM) THEN				
REFRESH REQ				
WEST CLEAR'	T	O10NORT		
0054334	A	O10REF	22-22	
'0-10 TIMING				
(O10TIM) THEN				
REFRESH REQ				
WEST SET'	T	O10REFT		
0056074	A	O10TIM	22-25	
'FORCE 0-10				
TIMING SIGNA				
L ACTIVE'	T	O10TIMT		
'CIOBUF+O'	T	O10TM		W=1 S=14 N=0 CL=2
0000001	A	1 TEST	18-11	
'CHKWRD+O'	T	2EPCK		W=1 S=15 N=0 CL=2
1 J 3ACC			1-09	

CDGSFB

M770

NO FLAG(S) FOUND IN THIS ASSEMBLY

STORE FANOUT BOARDS TEST-PART B

PR-1C926-50

23:35:52 2/05/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSFB ISSUE 05 PAGE 151

